Journal of Social Sciences & Humanities

About the Journal

Overview

Pertanika Journal of Social Sciences & Humanities (JSSH) is the official journal of Universiti Putra Malaysia published by UPM Press. It is an open-access online scientific journal which is free of charge. It publishes the scientific outputs. It neither accepts nor commissions third party content.

Recognized internationally as the leading peer-reviewed interdisciplinary journal devoted to the publication of original papers, it serves as a forum for practical approaches to improving quality in issues pertaining to social and behavioural sciences as well as the humanities.

JSSH is a **quarterly** (*March, June, September* and *December*) periodical that considers for publication original articles as per its scope. The journal publishes in **English** and it is open to authors around the world regardless of the nationality.

The Journal is available world-wide.

Aims and scope

Pertanika Journal of Social Sciences & Humanities aims to develop as a pioneer journal for the social sciences with a focus on emerging issues pertaining to the social and behavioural sciences as well as the humanities.

Areas relevant to the scope of the journal include Social Sciences—Accounting, anthropology, Archaeology and history, Architecture and habitat, Consumer and family economics, Economics, Education, Finance, Geography, Law, Management studies, Media and communication studies, Political sciences and public policy, Population studies, Psychology, Sociology, Technology management, Tourism; Humanities—Arts and culture, Dance, Historical and civilisation studies, Language and Linguistics, Literature, Music, Philosophy, Religious studies, Sports.

History

Pertanika was founded in 1978. A decision was made in 1992 to streamline Pertanika into three journals as Journal of Tropical Agricultural Science, Journal of Science & Technology, and **Journal of Social Sciences & Humanities** to meet the need for specialised journals in areas of study aligned with the interdisciplinary strengths of the university.

After almost 25 years, as an interdisciplinary Journal of Social Sciences & Humanities, the revamped journal focuses on research in social and behavioural sciences as well as the humanities, particularly in the Asia Pacific region.

Goal of *Pertanika*

Our goal is to bring the highest quality research to the widest possible audience.

Quality

We aim for excellence, sustained by a responsible and professional approach to journal publishing. Submissions are guaranteed to receive a decision within 14 weeks. The elapsed time from submission to publication for the articles averages 5-6 months.

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Pertanika is almost **40 years old**; this accumulated knowledge has resulted in Pertanika JSSH being abstracted and indexed in **SCOPUS** (Elsevier), Thomson (ISI) **Web of Science™ Core Collection** Emerging Sources Citation Index (ESCI). Web of Knowledge [BIOSIS & CAB Abstracts], **EBSCO** and EBSCOhost, **DOAJ**, **Google Scholar**, **TIB**, **MyCite**, **ISC**, **Cabell's Directories** & Journal Guide.

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The abbreviation for *Pertanika* Journal of Social Sciences & Humanities is *Pertanika J. Soc. Sci. Hum.*

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The Pertanika Journals and Universiti Putra Malaysia takes seriously the responsibility of all of its journal publications to reflect the highest in publication ethics. Thus all journals and journal editors are expected to abide by the Journal's codes of ethics. Refer to Pertanika's **Code of Ethics** for full details, or visit the Journal's web link at http://www.pertanika.upm.edu.my/code_of_ethics.php

International Standard Serial Number (ISSN)

An ISSN is an 8-digit code used to identify periodicals such as journals of all kinds and on all media–print and electronic. All Pertanika journals have ISSN as well as an e-ISSN.

Journal of Social Sciences & Humanities: ISSN 0128-7702 *(Print)*; ISSN 2231-8534 *(Online)*.

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A decision on acceptance or rejection of a manuscript is reached in 3 to 4 months (average 14 weeks). The elapsed time from submission to publication for the articles averages 5-6 months.

Authorship

Authors are not permitted to add or remove any names from the authorship provided at the time of initial submission without the consent of the Journal's Chief Executive Editor.

Manuscript preparation

Refer to Pertanika's **Instructions to Authors** at the back of this journal.

Most scientific papers are prepared according to a format called IMRAD. The term represents the first letters of the words **I**ntroduction, **M**aterials and Methods, **R**esults, **A**nd, **D**iscussion. IMRAD is simply a more 'defined' version of the "IBC" [Introduction, Body, Conclusion] format used for all academic writing. IMRAD indicates a pattern or format rather than a complete list of headings or components of research papers; the missing parts of a paper are: *Title, Authors, Keywords, Abstract, Conclusions*, and *References*. Additionally, some papers include Acknowledgments and Appendices.

The *Introduction* explains the scope and objective of the study in the light of current knowledge on the subject; the *Materials and Methods* describes how the study was conducted; the *Results* section reports what was found in the study; and the *Discussion* section explains meaning and significance of the results and provides suggestions for future directions of research. The manuscript must be prepared according to the Journal's **Instructions to Authors**.

Editorial process

Authors are notified with an acknowledgement containing a *Manuscript ID* on receipt of a manuscript, and upon the editorial decision regarding publication.

Pertanika follows a **double-blind peer-review** process. Manuscripts deemed suitable for publication are usually sent to reviewers. Authors are encouraged to suggest names of at least three potential reviewers at the time of submission of their manuscript to Pertanika, but the editors will make the final choice. The editors are not, however, bound by these suggestions.

Notification of the editorial decision is usually provided within ten to fourteen weeks from the receipt of manuscript. Publication of solicited manuscripts is not guaranteed. In most cases, manuscripts are accepted conditionally, pending an author's revision of the material.

As articles are double-blind reviewed, material that might identify authorship of the paper should be placed only on page 2 as described in the first-4 page format in Pertanika's **Instructions to Authors** given at the back of this journal.

The Journal's peer-review

In the peer-review process, three referees independently evaluate the scientific quality of the submitted manuscripts.

Peer reviewers are experts chosen by journal editors to provide written assessment of the **strengths** and **weaknesses** of written research, with the aim of improving the reporting of research and identifying the most appropriate and highest quality material for the journal.

Operating and review process

What happens to a manuscript once it is submitted to *Pertanika*? Typically, there are seven steps to the editorial review process:

1. The Journal's chief executive editor and the editorial board examine the paper to determine whether it is appropriate for the journal and should be reviewed. If not appropriate, the manuscript is rejected outright and the author is informed.

2. The chief executive editor sends the article-identifying information having been removed, to three reviewers. Typically, one of these is from the Journal's editorial board. Others are specialists in the subject matter represented by the article. The chief executive editor asks them to complete the review in three weeks.

   Comments to authors are about the appropriateness and adequacy of the theoretical or conceptual framework, literature review, method, results and discussion, and conclusions. Reviewers often include suggestions for strengthening of the manuscript. Comments to the editor are in the nature of the significance of the work and its potential contribution to the literature.

3. The chief executive editor, in consultation with the editor-in-chief, examines the reviews and decides whether to reject the manuscript, invite the author(s) to revise and resubmit the manuscript, or seek additional reviews. Final acceptance or rejection rests with the Edito-in-Chief, who reserves the right to refuse any material for publication. In rare instances, the manuscript is accepted with almost no revision. Almost without exception, reviewers' comments (to the author) are forwarded to the author. If a revision is indicated, the editor provides guidelines for attending to the reviewers' suggestions and perhaps additional advice about revising the manuscript.

4. The authors decide whether and how to address the reviewers' comments and criticisms and the editor's concerns. The authors return a revised version of the paper to the chief executive editor along with specific information describing how they have answered' the concerns of the reviewers and the editor, usually in a tabular form. The author(s) may also submit a rebuttal if there is a need especially when the author disagrees with certain comments provided by reviewer(s).

5. The chief executive editor sends the revised paper out for re-review. Typically, at least one of the original reviewers will be asked to examine the article.

6. When the reviewers have completed their work, the chief executive editor in consultation with the editorial board and the editor-in-chief examine their comments and decide whether the paper is ready to be published, needs another round of revisions, or should be rejected.

7. If the decision is to accept, an acceptance letter is sent to all the author(s), the paper is sent to the Press. The article should appear in print in approximately three months.

The Publisher ensures that the paper adheres to the correct style (in-text citations, the reference list, and tables are typical areas of concern, clarity, and grammar). The authors are asked to respond to any minor queries by the Publisher. Following these corrections, page proofs are mailed to the corresponding authors for their final approval. At this point, **only essential changes are accepted**. Finally, the article appears in the pages of the Journal and is posted on-line.

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Foreword

Welcome to the **Third Issue 2018** of the Journal of Social Sciences and Humanities (JSSH)!

JSSH is an open-access journal for studies in Social Sciences and Humanities published by Universiti Putra Malaysia Press. It is independently owned and managed by the university and run on a non-profit basis for the benefit of the world-wide science community.

This issue contains 54 articles, out of which one is a review paper and the rest (53) are regular articles. The authors of these articles come from different countries, namely Malaysia, Indonesia, Thailand, Iran, Nigeria, India, Korea, Vietnam, United Kingdom, Philippines, Oman and Jordan. Malaysia alone contributed 20 articles, the highest number of articles.

Articles submitted in this issue cover wide range of Social Sciences and Humanity scope including accounting, anthropology, architecture and habitat, arts and culture, economics, education, language and linguistics, law, literature, management, media and communication, political sciences and public policy, psychology, religion, sociology, sports, technology management and tourism. An article is outlined from each of four favoured scope in this issue: economics, education, language and linguistics, and psychology.

Selected from economics scope is an article entitled "Effects of Obesity in Labour Market Outcomes: Evidence from Malaysia" by *Foo Lee Peng, Hanny Zurina Hamzah, Norashidah Mohamed Nor* and *Rusmawati Said*, fellow researchers from Universiti Putra Malaysia (UPM), Malaysia. This article studied the relationship between obesity and labour market outcomes in Malaysia by applying the ordinal regression model on the collected questionnaires and face to face interviews of targeted group of employers. They found that employers do not consider workers' appearance and gender when they employ workers. The study failed to prove the existence of discrimination in wages, but managed to prove that obese workers receive unfavorable treatment. The information from this study may help the authorities in developing activities and programs in fighting obesity and how to encourage Malaysian to maintain healthy lifestyle. Insight of the paper is available on page 1957.

Selected from education scope is a paper entitled "Building Students' Character in Elementary School through the Scientific Method: A Case Study of the Lampung Province", written by fellow researchers from Universitas Lampung, Indonesia (*Herpratiwi, Ag. Bambang Setiyadi, Riswandi, Chandra Ertikanto* and *Sugiyanto*). The study was conducted with the objective of analysing the implementation of the scientific method of teaching social science subjects and educational character in the affective domain. The research used quasi-experimental methods and data were analysed using paired T-test. They found out that after being taught using the scientific method, the character value of social studies learners was significantly higher compared to before learning the scientific method. The detail of the study is available on page 1547.

Selected from language and linguistics scope is an article entitled "The Promotion of Engineering Students' English Presentation Ability Using the Genre-Based Approach" by Piyatida Changpueng and Karnchanoke Wattanasin, fellow researchers from King Mongkut's University of Technology North Bangkok, Thailand. They examined the presentation ability achievement of fourth-year undergraduate engineering students at their institute after being taught how to give oral presentation using genre-based approach (GBA). The study showed positive result of GBA implementation for students' presentation. The details of the article is available on page 2063.

Selected from psychology scope is an article entitled "Physiological and Psychological Health Benefits of Urban Green Space in Kuala Lumpur: A comparison between Taman Botani Perdana and Jalan Bukit Bintang" by fellow researchers from Universiti Putra Malaysia (UPM), Malaysia (*Daniel Mokhtar, Nor Akmar Abdul Aziz* and *Manohar Mariapan*). The researchers explored physiological and psychological effects of urban green space by using measurements and self-reported psychological responses to an urban park compared to a city environment. Physiological responses measured in the study include salivary cortisol concentration and diastolic blood pressure while psychological responses measured include Total Mood Disturbance and Positive and Negative Affect Schedule (PANAS). They found positive results indicating that urban green space has positive benefits physiologically and psychologically compared to urban environment. The detail of the article is available on page 2101.

We anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in reaching new milestones in your own research. Please recommend the journal to your colleagues and students to make this endeavour meaningful.

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All the papers published in this edition underwent Pertanika's stringent peer-review process involving a minimum of two reviewers comprising internal as well as external referees. This was to ensure that the quality of the papers justified the high ranking of the journal, which is renowned as a heavily-cited journal not only by authors and researchers in Malaysia but by those in other countries around the world as well.

We would also like to express our gratitude to all the contributors, namely the authors, reviewers and editors, who have made this issue possible.

JSSH is currently accepting manuscripts for upcoming issues based on original qualitative or quantitative research that opens new areas of inquiry and investigation.

SOCIAL SCIENCES & HUMANITIES

Review Article

Emotional Intelligence: Exploring the Road beyond Personality and Cognitive Intelligence

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ABSTRACT

Emotional intelligence research holds a popular status in current academic and business community. However, emotional intelligence as an independent construct has been debatable with regard to its theoretical and empirical significance ever since it was introduced. Furthermore, conceptual and operational definitions, measuring instruments and questionable validity and subsequent results are highly diverse and even contradictory. In an attempt to bring coherence to the diffuse body of literature on emotional intelligence, we argue how emotional intelligence is different from personality and cognitive intelligence. In light of this, the current paper has discussed previous research findings to gain more insights about emotional intelligence accounting for variance in outcomes not explained by personality and cognitive intelligence. The extant literature review has guided us to conclude that emotional intelligence is a unique construct, distinct from personality and cognitive intelligence. Scope for future research in the emotional intelligence field is also suggested.

Keywords: Cognitive intelligence, controversies, emotional intelligence, personality

INTRODUCTION

With the popularization, the construct of Emotional Intelligence (EI) has garnered considerable attention from both researchers and practitioners (O'Boyle, Humphrey, Pollack, Hawver, & Story, 2011). The roots of emotional intelligence can be found in the concept of social intelligence put forwarded by Thorndike (1920) and defined it as "the

ability to understand men, women, boys and girls to act wisely in human relations" (p. 228). Another early researcher who contributed to the progression of emotional intelligence was Wechsler (1940) who defined intelligence as the "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment" (p. 7). Wechsler (1940) poised that personality traits, intellective and other non-intellective components influenced intelligence. This non-intellective intelligence also carries the notion similar to emotional intelligence which is essential to achieve success in life. Gardner (1983) propounded a theory of multiple intelligences, wherein Gardner proposed the concept of interpersonal and intrapersonal intelligence that became the basis of the initial EI constructs. Salovey and Mayer (1990) formally coined the term Emotional Intelligence and defined it as "the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p.189). But the term became popular after the publication of Goleman's book "Emotional Intelligence-Why it matters more than IQ" in 1995. Since then literature in the field has come a long way. However, the field has also drawn criticism with regard to its conceptual overlap with personality and cognitive intelligence (Landy, 2005). Much criticism surrounds EI on whether it makes a unique contribution in explaining outcomes beyond personality and cognitive intelligence (Antonakis, Ashkanasy, & Dasborough, 2009). Therefore, the quest of the researchers is to find out how EI is different from earlier similar constructs.

Problem Statement

Prior studies have empirically shown that EI is a unique construct and explains outcomes over and above personality and cognitive intelligence (Di Fabio, Palazzeschi, & Bar-On, 2012; O'Boyle et al., 2011). However, there are findings suggesting debatable evidence for incremental validity of emotional intelligence (Amelang, & Steinmayr, 2006; Bastian, Burns, & Nettelbeck, 2005). These mixed findings have generated a research gap in the literature which requires further investigation (Amelang & Steinmay, 2006; Harms & Crede, 2010). This gap needs to be filled to bring more clarity as to what EI is and how EI is conceptually and empirically distinct from personality and cognitive intelligence. Therefore, the aim of this paper is to fill the identified gap by reviewing different approaches, models of EI and previous studies that were conducted to analyze the incremental validity of emotional intelligence in predicting outcomes above and beyond personality and cognitive intelligence. This review will contribute in determining whether EI is a unique construct or it is redundant. Figure 1 illustrates a conceptual framework that incorporates EI, cognitive intelligence, and personality and their relationships with outcomes. Here,

the incremental validity of EI in predicting outcomes above and beyond cognitive intelligence and personality is represented by a dark solid line.
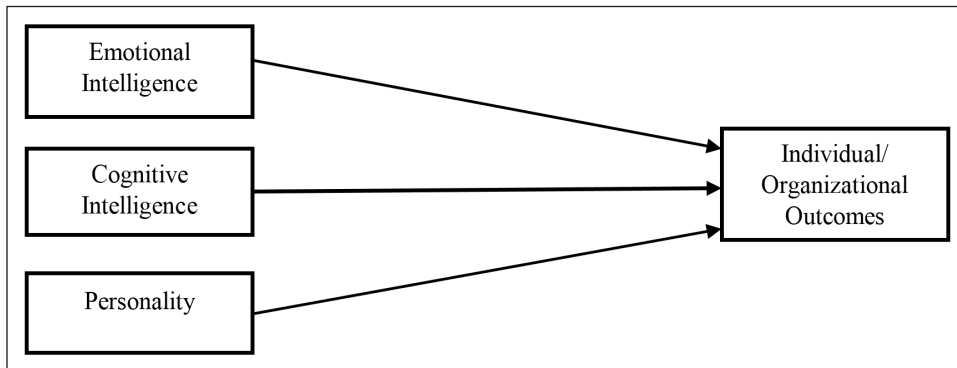
Figure 1. Conceptual framework linking emotional intelligence, cognitive intelligence and personality to individual/organizational outcomes

LITERATURE REVIEW

The construct of EI has been found to predict outcomes such as job performance, leadership effectiveness, well-being, engagement and job satisfaction (Akhtar, Boustani, Tsivrikos, & Chamorro-Premuzic, 2015; Higgs & Dulewicz, 2014; O'Boyle et al., 2011; Rosete & Ciarrochi, 2005; Singh & Woods, 2008). The substantial research in the field of EI has progressed through different approaches and models which are described here in this paper.

Different Approaches of EI

The Ability Approach. This approach includes ability model of EI. The ability model describes EI as a person's ability in recognizing and understanding emotional information (Mayer & Salovey, 1997). As an ability, it has maximum overlapping with cognitive intelligence (Mayer & Salovey, 1997).

The mixed approach. The Mixed approach incorporates both non-cognitive models (Bar-On, 2006) and competency-based models (Goleman, 1995). Non-cognitive models center around non-cognitive abilities while competency based models focus on competencies. These mixed models coincide with established models of personality in some way or another (Cherniss, 2010).

The Trait Approach. This perspective includes trait model of EI. This model assumes trait EI facets as personality traits, rather competencies or mental abilities or facilitators. Petrides and Furnham (2001) found a significant relationship between EI & the Big Five personality factors.

Theoretical Models and Measurements of EI

The literature on emotional intelligence has spawned different theoretical models and consequently the measuring instruments

that are being used to operationalize the construct of EI (Neubauer & Freudenthaler, 2005). There exist four distinct models of EI (Chernis, 2010): (1) Four-Branch model (Mayer & Salovey, 1997); (2) Emotional Social Intelligence (ESI) model (Bar-On, 2006); (3) The competency model (Boyatzis & Sala, 2004); and (4) Trait EI model (Petrides & Furnham, 2003).

Four-branch Model

The ability model of emotional intelligence is based on the fact that EI is a person's ability to recognize& use information about emotions to carry out abstract reasoning (Mayer & Salovey, 1997). Mayer and Salovey (1997) divided EI abilities into four branches, and these four branches formed the model known as four branch model. The four branches are:

1. Perceiving emotions: This branch involves the ability to recognize emotions of self and those of others accurately. This includes identifying emotions in faces, pictures, and voices.

2. Facilitating thought: The second branch of the model describes assimilation of emotions to facilitate thought. This branch involves one's ability to harness recognized emotions to guide thinking and problem solving which helps to make judgments.

3. Understanding emotions: This branch reflects the ability to comprehend and analyze emotions such that one can understand the cause and consequence of emotions and relations among emotions

4. Managing emotions: This involves the ability of a person to regulate emotions of self and others. This branch enables the individual to monitor and regulate emotions to workout strategy that will be used to enhance or suppress the emotion.

Perception and facilitation branches (the first two branches) of the model are called as 'experiential EI,' because these correspond to feelings. The third and fourth branches together are called as 'strategic EI' because these are responsible for planning and executing emotional information.

This model is most often operationalized by The Mayer, Salovey and Caruso Emotional Intelligence Test (MSCEIT) consisting of 141 items. The MSCEIT result comes out with 15 scores that consist of total emotional intelligence, area scores for strategic and experiential, four scores in each of the branches, and eight task scores (two for each branch) (MSCEIT: Mayer, Salovey, & Caruso, 2002).

Competency Model. This model of emotional intelligence focuses on competencies and skills (Boyatzis, 2009). This model is the combined work of Goleman and Boyatzis (as cited in Boyatzis & Sala, 2004). This framework includes both social competencies and personal competencies. Further social competencies comprised two dimensions: empathy and social skills whereas personal

competencies included three dimensions: self-awareness, self -regulation, and motivation. Later, Boyatzis and Goleman revised their model with four clusters (self-awareness, self-management, social awareness, and relationship management) and 18 competencies (Boyatzis & Sala, 2004). Further, Boyatzis (2007) refined the model, and now model includes 12 competencies contained within four clusters.

1. Self-Awareness: It is concerned with recognizing and understanding emotions of self. This cluster has only one competency: Emotional self-awareness

2. Self-Management: This is all about regulating our own emotions. It includes four competencies: Emotional self-control, Achievement orientation, Positive outlook and Adaptability

3. Social Awareness: It deals with recognizing and understanding the emotions of others. It includes two competencies: Empathy and Organizational awareness

4. Relationship Management: This refers to harnessing our emotional understanding to build rapport and promote relationship with others. This cluster has five competencies: Influence, Coach and mentor, Conflict management, Inspirational leadership and Teamwork

This model is examined through the instrument known as Emotional Social Competence Inventory (ESCI) instrument which is a 360˚ method of assessment comprising 68 items. It provides ratings on a series of behavioral indicators of EI (ESCI: Hay Group, 2011).

Emotional Social Intelligence Model. Bar-On's model which is commonly known as ESI model is divided into five primary scales and fifteen subscales. The primary scales are Intrapersonal skills, Interpersonal skills, Stress management, Adaptability and General mood (Bar-On, 2006). Recently Multi-Health Systems Inc. (MHS) team has revised the model with sixteen subscales (Stein & Deonarine, 2015). The five scales and their subscales are:

1. Self-perception refers to person's awareness of self and the ability to recognize and manage oneself. It encompasses emotional self-awareness, self-regard, and self-actualization.

2. Self-expression is concerned with the ability to express oneself to the outside world verbally and non -verbally. It includes Emotional expression, Independence and assertiveness

3. Interpersonal pertains to human skills which involve the ability of an individual to deal with other people and building relationships. It has three subscales: empathy, social responsibility, and interpersonal relationships.

4. Decision-making relates to utilizing the emotional information in the

best possible manner so that best decisions can be made to solve problems. Its three subscales are impulse control, reality testing, and problem-solving.

5. Stress management is the person's ability to remain calm, focused and being able to survive with a positive attitude in adverse conditions. Its three subscales are flexibility, stress tolerance and optimism.

The most common instrument used to examine this model is Emotional Quotient Inventory (EQ-i$^{2.0}$: MHS, 2011). EQ-i$^{2.0}$ is a self -report measure having 133 short statements, which works on updated model and measures the individual construct.

Trait Model. The Trait EI model proposed by Petrides and Furnham is the result of content analysis of the previous major EI models (Petrides & Furnham, 2001, 2003). This model consists of all personality facets that are particularly associated with emotion. Petrides's model encompasses four factors with 15 facets of the personality domain (Petrides, 2009): The four factors are:

1. Emotionality: It corresponds to the individuals who are aware of emotions of self and others. The facets consists of empathy, emotion perception, emotion expression, and relationships

2. Self-control: It pertains to individuals who have control over their needs and fantasies. The facets include emotion

regulation, impulsiveness, and stress management.

3. Sociability: This trait makes individual socially active. The facets are emotion management, assertiveness, and social awareness.

4. Well-being: This relates to individuals who are hopeful, cheerful, and fulfilled on the basis of their actions and expectations. The facets involve trait optimism, trait happiness, and self-esteem, and auxiliary facets (self-motivation and adaptability)

The construct of trait EI is measured with Trait Emotional Intelligence Questionnaire (TEIQue) (Petrides, 2009). The TEIQue comprises 153 items, producing scores on 15 subscales, four factors, and global trait EI.

Distinguishing Emotional Intelligence from Similar Constructs

EI has often been criticized for whether EI instruments measure emotional intelligence or some aspect of Intelligent Quotient (IQ) or personality? EI is different from personality traits because traits are considered essentially stable over a period, and it is a unique pattern of how an individual behaves in different situations (Costa & McCrae, 1992), while EI as an ability can be developed over a period of time (Boyatzis, 2009). Previous studies have also demonstrated that personality is more conceptually and empirically distinct from emotional intelligence (Caruso, Mayer, & Salovey, 2002; Petides, Pita, & Kokkinaki, 2007).

According to Sternberg (1997), "Intelligence comprises the mental abilities necessary for adaptation to, as well as shaping and selection of, any environmental context" (p. 1030). In a theory of multiple intelligences, Gardner (1983, 1993, 2006) proposed eight different types of intelligences. These intelligences are "linguistic, logical-mathematical, spatial, musical, bodily- kinesthetic, interpersonal, intrapersonal, and naturalist." Simply put, intelligence is abstract reasoning and ability to learn (Sternberg, 1997). However, abstract reasoning works with an input function. Different intelligences are often conceptualized on the basis of what is being processed, i.e., the input. The input may be verbal, spatial, cognitive or emotional. Irrespective of the type of intelligence, each functions through a set of processes which remains universal (Sternberg, 1999, 2004). Gardner's interpersonal and intrapersonal intelligence subsequently became the basis of the initial EI constructs. Sternberg (1997) suggested that EI also represents mental ability, a kind of intelligence, such that how an individual use this ability in different environment determines his emotional intelligence. However, intelligences such as musical and bodily- kinesthetic do not meet the criteria to be considered as intelligence as these abilities are not required universally to adapt to the environment (Sternberg, 1997). The basic distinction between emotional and cognitive intelligence is that EI pertains to how human beings interact with their immediate environment and interpret and compare feelings (Mayer & Salovey, 1997). These emotional abilities are essential to adapt to the environment. While cognitive intelligence is the ability to perceive relationships among objects and problem-solving in novel situations on the basis of learning, memory (Mayer & Salovey, 1997). Moreover, cognitive ability measures evaluate the problem-solving ability in different cognitive domains (Brody, 2004). Table 1 shows review of previous studies arranged chronologically beginning with 2002 that guide to understand whether EI predicts outcomes above and beyond personality and cognitive intelligence.

Table 1
Summary of EI, personality and cognitive intelligence research findings

Author (s)	Purpose	Sample	Key Findings
Van der Zee, Thijs, & Schakel (2002)	To evaluate the incremental validity of EI in predicting academic and social success beyond academic intelligence and personality.	116 students	Results showed that EI predicted both academic and social success above academic intelligence and personality.
Lopes, Salovey, & Straus (2003)	To investigate whether EI predicted the quality of one's social relationships when controlling for the Big Five and verbal intelligence.	103 students	Results had shown that EI explained variance in quality of one's social relationships when controlling for the Big Five and verbal intelligence.

Table 1 *(continue)*

Author (s)	Purpose	Sample	Key Findings
Vakola, Tsaousis, & Nikolaou (2004)	To examine the role of EI and personality variables on attitudes toward organizational change.	137 professionals	Results showed that EI explained variance beyond personality dimensions, in predicting employees' attitudes toward change.
Rosete & Ciarrochi (2005)	To investigate the relationship between EI, personality, cognitive intelligence and leadership effectiveness	41 executives	The results showed that higher EI was associated with higher leadership effectiveness, and EI also explained variance not explained by either personality or IQ.
Coˆteˊ & Miners (2006)	To determine how EI and cognitive intelligence is associated with task performance	175 employees	The results revealed that EI accounted for job performance over and above personality and cognitive ability even when personality and intelligence were controlled.
Furnham& Christoforou (2007)	To examine the effects of personality traits and trait EI on happiness.	120 participants	Trait EI predicted happiness even after controlling for personality.
Singh & Woods (2008)	To examine the joint predictive effects of trait EI, extraversion, conscientiousness, and neuroticism on well- being and job satisfaction.	123 individuals	Trait EI was found to be strongly correlated with job satisfaction. Results also confirmed that trait EI accounted for additional variance in well- being above personality.
Guillén, Saris, & Boyatzis (2009)	To determine the predictive and incremental validity of EI in predicting performance effectiveness over personality traits.	223 executives	The results of the analysis found that competencies were more powerful predictors of performance than global personality traits.
Joseph & Newman (2010)	To investigate whether EI accounted for incremental variance in job performance over and above the Big Five personality and cognitive ability.	Meta-analysis	Results revealed that all three types of EI measures (performance based, self-report ability measures, and self-report mixed models) demonstrated incremental validity over and above the Big Five personality traits and cognitive ability.
O'Boyle et al. (2011)	To compare how different conceptualizations of EI predicts job performance and to investigate whether EI incrementally predict job performance over and above the Big Five personality and cognitive ability.	Meta-analysis	Results had concluded that self- report mixed models of EI show highest incremental predictive value in predicting job performance over and above cognitive intelligence and personality.

Table 1 *(continue)*

Author (s)	Purpose	Sample	Key Findings
Boyatzis, Good, & Massa (2012)	To investigate how emotional & social competencies, cognitive intelligence (g), and personality affect leader performance.	60 executives	The results revealed that leader performance was significantly predicted by emotional and social competencies and not by intelligence and personality.
Føllesdal& Hagtvet (2013)	To assess whether ability measure of EI can predict transformational leadership when controlling for the Five Factor Model (FFM) and General Mental Ability (GMA).	104 executives	The results found that EI was not related to transformational leadership after controlling for the FFM and GMA.
Higgs & Dulewicz (2014)	To examine the relationship between EI, personality, and well-being, and evaluate whether EI explains variance in well- being beyond personality.	156 managers	Results showed that EI explained variance in well- being beyond personality dimensions.
Akhtar, Boustani, Tsivrikos, & Chamorro-Premuzic (2015)	To examine the effects of the Big Five personality traits, work-specific personality, and trait EI, on work engagement.	1050 professionals	Results of the analysis showed that Trait EI predicted work engagement over and above personality.

CONCLUSION

Despite the fact that the research in the field of emotional intelligence has garnered immense interest among scholars and practitioners, confusion has developed with regard to its actual conceptualization and operationalization (Mayer, 2006). EI was originally understood as a blend of abilities which are related to one another (Salovey & Mayer, 1990) whereas it had been conceptualized as "eclectic mix of traits" by different investigators (Bar-On, 2004; Petrides & Furnham, 2001). Moreover, the construct has been associated with controversy due to lack of conclusive findings regarding discriminant and incremental validity of EI above and beyond personality and cognitive intelligence.

Knowing the fact that EI is surrounded by criticism, it was of paramount importance to substantiate the literature by scrutinizing the scope for discriminant and incremental predictive utility of the construct. The current paper sought to review EI with personality and cognitive intelligence in their associations with different individual outcomes.

In view of the criticisms associated with the discriminant validity of EI, there has been a constant flux of studies trying to establish EI as a unique construct. In line of this, majority of the studies reviewed, have been found to conclude EI as a unique construct and demonstrating its incremental validity over personality traits or IQ in predicting various outcomes. On the other

hand, only a few studies claimed that EI did not account for unique variance beyond personality and cognitive intelligence. In addition, review of different studies incorporating EI, personality and cognitive intelligence also found different correlates of EI above and beyond personality and cognitive intelligence. This also establishes the construct of EI as a robust predictor of important outcomes. Moreover, the weight of the major evidence supports the claim that EI is conceptually distinct from personality and cognitive intelligence. In order to expand a more inclusive perspective on the uniqueness of EI, an opportunity for further research exists for the future researchers to make efforts on validation and consolidation of the construct and its measurement. It is expected that more exhaustive criteria will yield additional interesting predictions. It would be interesting to further investigate studies that incorporate EI, personality and cognitive intelligence all together so that independent contribution of each could be assessed with other outcomes. Considering the controversies associated with incremental validity of EI, that it does not measure anything new that could not be assessed by personality or IQ measures, it was found that there is a wide scope to integrate empirical evidence to highlight the role of EI at workplace which is beyond what is explained by personality or IQ. In light of this, current paper reviewed different conceptualizations of EI and summarized existing research evidence to demonstrate the usefulness of EI as an independent

construct. Overall, this review concludes that EI not only demonstrates just predictive validity but also shows discriminant and incremental validity when compared with traditional constructs such as personality or IQ. Thus, current paper contributes to bring clarity to EI literature by shading light on what actually EI is and how EI explains additional variance in range of outcomes not explained by personality and cognitive intelligence which further enhances comprehensive understanding of EI. This also helps to distinguish and strengthen the utility of EI as an independent construct. Thus, current paper contributes in highlighting bigger picture of EI-outcome relationships. Additionally, review of previous findings helps in understanding relevance of EI, personality and cognitive intelligence at workplace.

REFERENCES

Akhtar, R., Boustani, L., Tsivrikos, D., & Chamorro-Premuzic, T. (2015). The engageable personality: Personality and trait EI as predictors of work engagement. *Personality and Individual Differences*, 73, 44-49.

Amelang, M., & Steinmayr, R. (2006). Is there a validity increment for tests of emotional intelligence in explaining the variance of performance criteria? *Intelligence*, 34, 459–468.

Antonakis, J., Ashkanasy, N. M., & Dasborough, M. T. (2009). Does leadership need emotional intelligence? *The Leadership Quarterly, 20*(2), 247-261.

Bar-On, R. (2004). The Bar-On Emotional Quotient Inventory (EQ-i): Rationale, description and summary of psychometric properties. In G.

Geher (Ed.), *Measuring Emotional Intelligence: Common Ground and Controversy* (pp. 115–145). New York: Nova Science.

Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI) 1. *Psicothema, 18*(Suplemento), 13-25.

Bastian, V. A., Burns, N. R., & Nettelbeck, T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality and Individual Differences*, 39, 1135–1145.

Boyatzis, R. (2007). The *Creation of the Emotional and Social Competency Invento*ry (ESCI) [Hay Group research report]. Hay Group: Boston.

Boyatzis, R. E. (2009). Competencies as a behavioral approach to emotional intelligence. *Journal of Management Development, 28*(9), 749-770.

Boyatzis, R. E., & Sala, F. (2004). Assessing emotional intelligence competencies. In G. Geher (Ed.), *Measuring Emotional Intelligence: Common Ground and Controversy* (pp. 147–180). Hauppage, New York: Nova Science.

Boyatzis, R. E., Good, D., & Massa, R. (2012). Emotional, social, and cognitive intelligence and personality as predictors of sales leadership performance. *Journal of Leadership & Organizational Studies, 19*(2), 191-201.

Brody, N. (2004). What cognitive intelligence is and what emotional intelligence is not. *Psychological Inquiry, 15*(3), 234-238.

Caruso, D. R., Mayer, J. D., & Salovey, P. (2002). Relation of an ability measure of emotional intelligence to personality. *Journal of Personality Assessment, 79*(2), 306-320.

Cherniss, C. (2010). Emotional intelligence: Toward clarification of a concept. *Industrial and Organizational Psychology, 3*(2), 110-126.

Costa, P. T., & McCrae, R. R. (1992). Four ways five factors are basic. *Personality and Individual Differences*, *13*(6), 653-665.

Cote, S., & Miners, C. T. (2006). Emotional intelligence, cognitive intelligence, and job performance. *Administrative Science Quarterly, 51*(1), 1-28.

Di Fabio, A., Palazzeschi, L., & Bar-On, R. (2012). The role of personality traits, core self-evaluation, and emotional intelligence in career decision-making difficulties. *Journal of Employment Counseling*, *49*(3), 118-129.

Føllesdal, H., & Hagtvet, K. (2013). Does emotional intelligence as ability predict transformational leadership? A multilevel approach. *The Leadership Quarterly, 24*(5), 747-762.

Furnham, A., & Christoforou, I. (2007). Personality traits, emotional intelligence, and multiple happiness. *North American Journal of Psychology*, *9*(3), 1-25.

Gardner, H. (1983). *Frames of Mind*. New York, NY: Basic Books.

Gardner, H. (1993). *Multiple Intelligences: The Theory in Practice*. New York: Basic.

Gardner, H. (2006). *Multiple Intelligences: New Horizons in Theory and Practice*. New York: Basic.

Goleman, D. (1995). *Emotional intelligence: Why It Can Matter More Than IQ*. New York, NY: Bantam Books.

GuillénRamo, L., Saris, W. E., & Boyatzis, R. E. (2009). The impact of social and emotional competencies on effectiveness of Spanish executives. *Journal of Management Development, 28*(9), 771-793.

Harms, P. D. & Credé, M. (2010). Remaining issues in emotional intelligence research: construct overlap, method artifacts, and lack of incremental validity. *Industrial and Organizational Psychology*, *3*(2), 154-158.

Hay group. (2011) *Emotional & Social Competence Inventory (ESCI): A User Guide for Accredited Practitioners*. Boston: McClelland Center for Research and Innovation, Hay Group.

Higgs, M., & Dulewicz, V. (2014). Antecedents of well-being: A study to examine the extent to which personality and emotional intelligence contribute to well-being. *The International Journal of Human Resource Management*, *25*(5), 718-735.

Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology, 95*(1), 54-78.

Landy, F. J. (2005). Some historical and scientific issues related to research on emotional intelligence. *Journal of Organizational Behavior, 26*(4), 411-424.

Lopes, P. N., Salovey, P., & Straus, R. (2003). Emotional intelligence, personality, and the perceived quality of social relationships. *Personality and Individual Differences*, *35*(3), 641-658.

Mayer, J. D. (2006). A new field guide to emotional intelligence. In J. Ciarrochi, J. P. Forgas, & J. D. Mayer (Eds.), *Emotional Intelligence in Everyday Life* (pp. 3–26). New York: Psychology Press.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) User's Manual.* Toronto, Ontario, Canada: Multi-Health Systems.

Mayer, J. D. & Salovey, P. (1997). "What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), *Emotional Development and Emotional Intelligence: Educational Implications* (pp. 3-31). New York: Basic Books.

Multi-Health Systems Inc. (2011). *Emotional Quotient Inventory 2.0: User's Handbook.* Toronto: Multi-Health System In.

Neubauer, A. C., & Freudenthaler, H. H. (2005). Models of emotional intelligence. In R. Schulze & R. D. Roberts (Eds.), *Emotional Intelligence: An International Handbook* (pp. 31–50).

Ashland, OH: Hogrefe & Huber Publishers.

O'Boyle, E. H., Humphrey, R. H., Pollack, J. M., Hawver, T. H., & Story, P. A. (2011). The relation between emotional intelligence and job performance: A meta-analysis. *Journal of Organizational Behavior, 32*(5), 788-818.

Petrides, K. V. (2009). *Technical manual for the Trait Emotional Intelligence Questionnaires (TEIQue)*. London, England: London Psychometric Laboratory.

Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality, 15*(6), 425-448.

Petrides, K. V., & Furnham, A. (2003). Trait emotional intelligence: Behavioural validation in two studies of emotion recognition and reactivity to mood induction. *European Journal of Personality*, *17*(1), 39-57.

Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology*, *98*(2), 273-289.

Rosete, D., & Ciarrochi, J. (2005). Emotional intelligence and its relationship to workplace performance outcomes of leadership effectiveness. *Leadership & Organization Development Journal, 26*(5), 388-399.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality, 9*(3), 185-211.

Singh, M., & Woods, S. A. (2008). Predicting general well-being from emotional intelligence and three broad personality traits. *Journal of Applied Social Psychology*, *38*(3), 635-646.

Stein, S. J., &Deonarine, J. M. (2015). Current Concepts in the Assessment of Emotional

Intelligence. In S. Goldstein, D. Princiotta, & J. A. Naglieri (Eds.). *Handbook of Intelligence* (pp. 381-402). New York: Springer Heidelberg Dordrecht.

Sternberg, R. J. (1997). The concept of intelligence and its role in lifelong learning and success. *American Psychologist, 52*(10), 1030-1037.

Sternberg, R. J. (1999). Intelligence as developing expertise. *Contemporary Educational Psychology*, 24, 359–375.

Sternberg, R. J. (2004). Culture and intelligence. *American Psychologist*, *59*(5), 325–338.

Thorndike, E. L. (1920). Intelligence and Its Uses, *Harper's Magazine*, 140, 227-235.

Vakola, M., Tsaousis, I., & Nikolaou, I. (2004). The role of emotional intelligence and personality variables on attitudes toward organizational change. *Journal of Managerial Psychology, 19*(2), 88-110.

Van der Zee, K., Thijs, M., & Schakel, L. (2002). The relationship of emotional intelligence with academic intelligence and the Big Five. *European Journal of Personality*, *16*(2), 103-125.

Wechsler, D. (1943). Non-intellective factors in general intelligence. *The Journal of Abnormal and Social Psychology, 1*, 101-103.

Suitability of Textbook for the Improvement of Linguistic Competence in Chinese by International Relations Students in Indonesia

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ABSTRACT

The necessity of mastering the Chinese language, Indonesia's second foreign language, has made it a priority subject among foreign languages in the Department of International Relations (IR) in many universities in Indonesia. The ideal textbook for the subject can boost learning and student competence and achievement in mastering the language. The selection of textbooks has not taken into consideration the background and motivation of students, learning objectives, frequency and length of study and student expectations. This paper discusses the need for a textbook to be used by IR majors in Indonesia. The data collection is populated through the distribution of questionnaires to eight universities that hold Chinese language classes for IR majors. The study concludes that the students expected a textbook to contain appropriate and applicable formal and informal language acquisition materials related to IR. The study looks at the cultural knowledge of the destination, lessons on the writing of Chinese characters and grammar exercises. Regarding the order of topics for learning Chinese by IR students, the students perceived that the right order would be: greetings, self-introduction, letters and numbers, time, names of days and months, daily activities, transportation, public facilities, directions and instructions, professions, international relations, politics and economy.

Keywords: International relations, Chinese language, textbook, foreign language

INTRODUCTION

At present, International Relations (IR) students studying the Chinese language are not equipped with a proper textbook. To acquire the language, students must depend on habitual utterance expressions including self-introduction, providing their profile, the alphabet, numbers, telling the time, the days of the week and stating daily activities. Students enrolled in such classes have opined that the Chinese textbook in use was superficial and contained little discussion of issues related to society, the economy, the law, politics, culture, local values and other pertinent matters. This suggests that to the students at least, a textbook plays a prominent role in foreign language learning.

Chen (2013) contended that Teaching Chinese as a Foreign Language (TCFL) had become a common phenomenon throughout the world in recent years. This was confirmed by Chisoni (2015), who stated that learning Chinese had become a global trend. According to Chisoni (2015), the demand for learning Chinese in the world is driven by political, social and economic needs. In addition, the rapid growth of China's economy and political power has nudged Chinese onto the world stage as a prominent language.

Pearson (2014) and Chisoni (2015) contended that the more extensive the diplomatic and trade ties between China and the West, the more the desire of Western countries to learn Chinese for practical purposes. Chisoni (2015) underlined that not only was there a need for the Chinese language to now be learnt, an understanding of the Chinese culture is also necessary because language and culture are interdependent and interrelated. Previous research into Chinese as a second language only emphasized on the challenges and difficulties of the Chinese characters and the tonal system and the importance of understanding Chinese grammar. Trivial emphasis incorporates how cultural differences in learning a second language can affect the way a foreign or second language is taught or learnt, whereas Pearson (2014) asserted that the textbook was the most important teaching tool and was useful for learning the Chinese language.

Textbooks play an important role in the classroom and to some extent prepare learners for future learning as well. The development of learner autonomy is sometimes undertaken through a 'training school' or 'instructions of specific strategy' but most likely, the context in which learners encounter the idea of autonomy regularly is the language course and the textbooks used. According to Reinders and Balçikanli (2011), textbooks might include a deliberate focus on the learning process and might encourage students to reflect on their progress, and thus, textbooks were likely to play a potentially important role in the development of students' independent learning skills.

Ying et al. (2017) reiterated the importance of studying IR, pointing out that it was not only acquiring the ability to analyze interaction among different state actors, but also non-state actors, specifically

individuals and groups of people through language and culture. Understanding and mastering foreign languages of other countries can improve bilateral relations and create mutually advantageous relationships. In addition, mastering a foreign language will enable students to analyze phenomena and common issues pertaining to social, economic, legal and political issues of the country in which they are interested. Foreign language proficiency is also a very good asset for students interested in learning basic negotiation skills and diplomatic techniques, which are indispensable for International Relations students. The Department of IR, BINUS University, encourages students to learn a second foreign language other than English. The Chinese language has been a favorite among students. However, the available textbook seems inappropriate and cannot fulfil the expectations of students and or of the job market.

This research sought to look into the expectations of IR students with regard to an appropriate textbook and its structure. The study aimed to identify the requirements for an appropriate Chinese textbook. The implementation of the research was oriented for the development of an opposite Chinese textbook for IR students based on the characteristics of learners' relevant knowledge studies. The study contributes to and offers feedback for teachers of the Chinese language in selecting appropriate material to achieve the targeted competencies and objectives.

LITERATURE REVIEW

Jack (2001), said that the textbook was an essential component in most language programmes and in many situations, they serve as the basis for the input language. Textbooks are the main source of learning materials for learners. Teachers, in addition to teaching, contribute vital feedback on students' learning that can help them progress in mastering the language. Roger Seguin (1989) said that the role of a textbook was not only to facilitate teaching but also to develop the learner's interest in books and the habit of using textbooks to expand knowledge and to search for information. Meanwhile, Nguyen (2011) also identified that learners relied on language learning from textbooks.

According to Tim Oates (2014), teachers considered textbooks to be very helpful in clarifying the progress of learning a subject. Texts used in the textbook encourage clarity on the key concepts and the core knowledge, provide clear learning progress, including examples and applications, supporting reflection of the students, and can be used in different ways by different teachers. Pearson (2014) said that the effective textbook was a mixture of the teaching experience of non-natives and realistic user input from the native language. The partnership between the perspective of native and non-native is something we have to consider when trying to find source material. In addition, learning about what is relevant to the individual is the biggest motivating factor in learning a language. Textbooks show how the way teachers teach and the way students learn

can be integrated effectively. Lee (2012) stated that the role of the textbook was important in an educational situation. She emphasized that textbook provision for foreign language education should be in line with the learner's quality of the learning experience and objectives in learning the language.

Ellis (1997) argued that the evaluation of textbooks helped managers and teaching staff to choose the most appropriate materials for specific learning. It also contributes to identifying the strengths and weaknesses of a particular textbook that has been used, giving feedback to teachers in the process of adapting to the use of textbooks. Wang (2014) said that a textbook was a tool, and teachers must know not only how to use it, but how to make it more useful. Research conducted by Reinders and Balcikanli (2011) about the relationship between textbooks and learner autonomy found that many language textbooks do not explicitly encourage learner autonomy.

METHODS

This qualitative research was based on the Qualitative Description (QD) method. According to Sefcik and Bradway (2017), QD was a suitable goal when a straight description of a phenomenon is desired or information is sought to develop and refine questionnaires or interventions. Data collection was achieved using a self-administered questionnaire (Fink, 2002). The population under study came from International Relations departments in

Indonesian universities enrolled in Chinese language classes. The selection of sample was undertaken using simple random sampling techniques (Ali, 2014; Creswell, 2013). The data gathered from the questionnaire accommodated the IR students' expectations of textbooks for learning Chinese. The sample of 145 students consisted of 60 men and 85 women. This research took six months, from January to July 2015. The research phase began with pilot testing of the questionnaire to find out the validity of the contents of the questionnaire and the substance of the questions (Ali, 2014) based on 20 students majoring in IR. Questions that complied with the criterion of understanding were selected and the rest were revised. Valid questionnaires were distributed to students majoring in IR who were enrolled in Chinese language classes in eight universities in Indonesia, namely: Al-Azhar (Jakarta), BINUS University (Jakarta), Padjadjaran University (Bandung), UNIKOM (Bandung), Sebelas Maret University (Surakarta), Andalas University (Padang), Udayana University (Bali) and President University (Cikarang).

RESULTS AND DISCUSSION

The study focused on the content of Chinese textbooks as expected by International Relations students. The researcher intended to reveal the reasonable background to students' preferences to the course whether or not it was in the curriculum, personal motivation to understand the Chinese language, future employment factors,

family encouragement, peer influence or environment support. The graph (Figure 1) below is based on data obtained from the 145 respondents from eight universities and shows their purpose of learning the Chinese language.
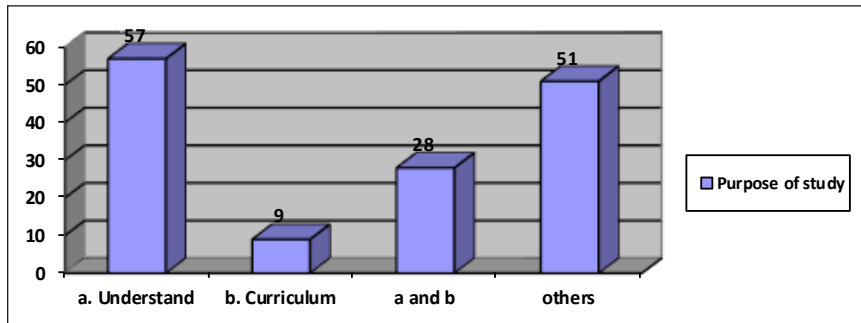
Figure 1. Purpose of studying the Chinese language

The data depicted that most of the students were motivated to learn the Chinese language because of personal desire to understand the language. The highest percentage for purpose of studying was to understand the language (39.31%). This concurred with research results obtained by Pearson (2014) that showed that the most important motivation for learning a foreign language was the ability to communicate verbally with others. Research by Wang, Kong and Farren (2014) was also in line with the findings of this study, as they had found that the students surveyed had hoped to communicate with others and to understand what was said in conversations.
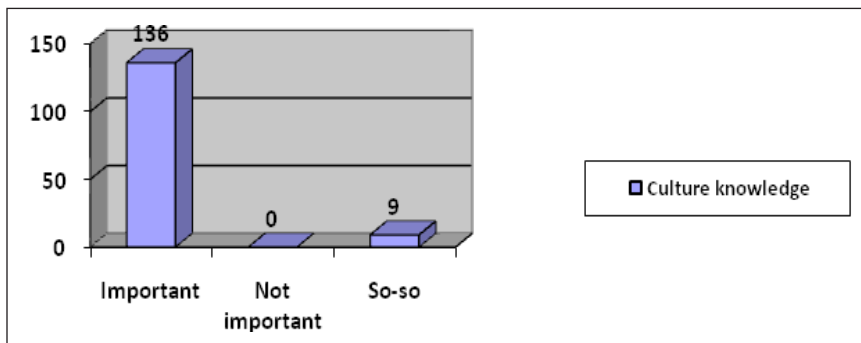
Figure 2. Culture knowledge in Chinese language textbooks

Ninety four percent of the students realized the importance of understanding the Chinese culture, signaling that they were aware that language and culture are interdependent. The success of communication depends on the understanding of native culture. Learning a language is inseparable from the learning

process of daily-use intention, especially the influence of the language and its role in forming the culture of native speakers. In today's language learning methodologies, the ability to speak fluently like a native speakers is no longer the most important objective. Understanding the culture of the language being studied plays a significant role in determining the success of the delivery of the message and the establishment of smooth communication between the speaker and the interlocutor.

Cultural understanding or the intercultural competence of students needs to be developed because it is an ideal achievement for attainment in language learning, especially when the language in question is a second or foreign language. Chisoni (2015) opined that one would not be able to speak the language without the culture. Language and culture are intertwined. Society expresses their views in language and preserves a culture from generation to generation. Culture, in terms of language teaching and learning, is usually associated with language acquisition (Byram & Grundy, 2002). Tang (1999) argued that one of the aspects that sometimes appeared as a topic of discussion in foreign language teaching is the relationship between knowledge of foreign languages and cultural knowledge of the origin language. Tang stated that language was part of a culture and language comes with some cultural associations attached to it. He added that by speaking a language, therefore, one automatically aligned oneself with the culture of the language.

Arabski and Wojtaszek (2011) argued that communicative competence was the goal of teaching and learning a foreign language; the relationship between language and culture has been a new emphasis in research on second language acquisition and foreign language learning. Cakir (2006) said during language teaching culture should also be automatically taught so that when language learners communicate privately with individuals from other cultural backgrounds, they understood the cultural influences on individual behaviour in the workplace as well as the influence of cultural patterns that affected the mind, activities and form of linguistic expression. In addition to cultural knowledge in Chinese language learning, vocabulary learning and knowledge related to the field of International Relations of science is also important. The use of textbooks that contain vocabulary and knowledge in accordance with students' learning abilities and goals are considered substantial. Therefore, understanding the language and cultural knowledge is highly notable.

As many as 85% of the students in this study found that a textbook that contains vocabulary and knowledge in accordance with is important. They found that teaching materials that taught only everyday conversation were able to prepare them for communication in international society and they demanded such information from the textbook in use. Indeed, Reinders and Balcikanli (2011) had proposed that textbooks attempted to provide information about and practice in skills for autonomous
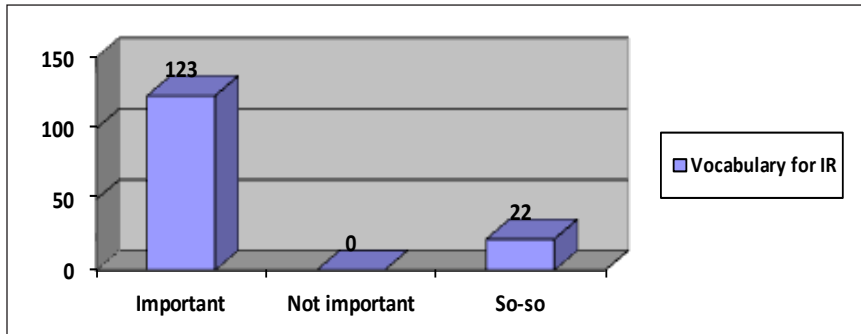
Figure 3. Vocabulary for international relations

language learning. The importance of vocabulary in language learning was also noted by Cobb (2007), who highlighted that text comprehension depended heavily on detailed knowledge of most of the words in a text.

Pearson (2014) in a study of Chinese language learning in London identified that diplomats would more likely be fully literate elites because of the context of the materials they translated and the social groups they interacted with. This interaction would require a knowledge of more advanced, comprehensive and abstract vocabulary. Thus, IR graduates who aspire to become diplomats also require knowledge and vocabulary that would support them in their career as a diplomat. Jiang (2000) stated that the task of vocabulary acquisition was primary for remembering the world.
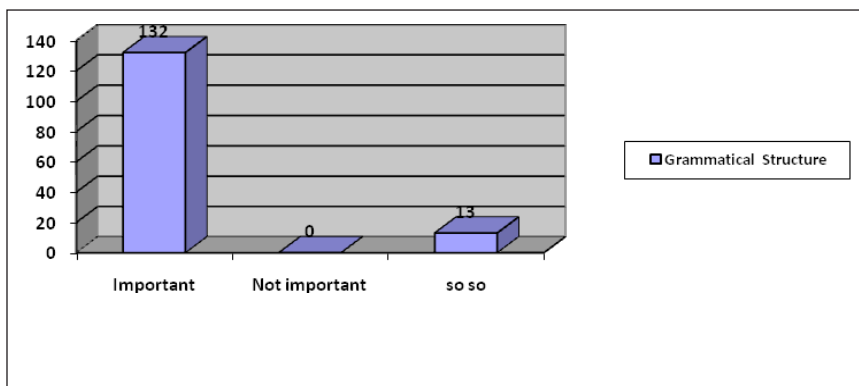
Figure 4. Formal or informal language in textbooks

As many as 54% of the students responded that reading material or dialogue in the textbooks should contain use of formal and informal language. The students were aware of the international associations i.e. they knew that they needed to read content related to their field of study. Teachers can also assess the ability of students from their reading ability instead of through observation. Singhal (1998) stated

that the reading process was essentially "unobservable," so that teachers are required to make significant efforts in the classroom to understand their students' reading behaviors and be able to help students understand those behaviors. Therefore, formal and informal language in the textbook is related to the vocabulary, grammatical structure, and cultural knowledge.
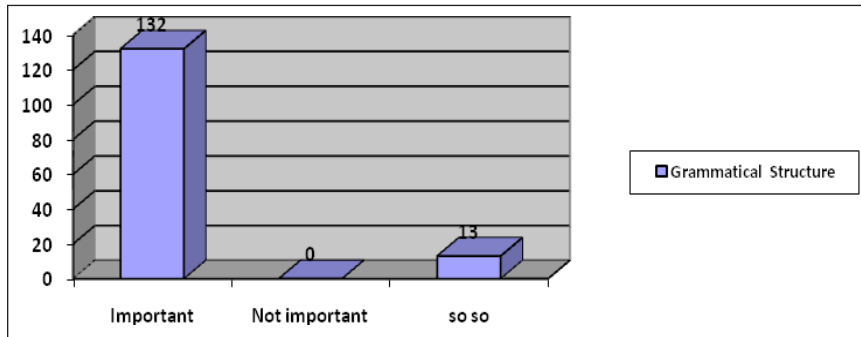
Figure 5. Importance of learning grammatical structure

As many as 93% of the students believed that grammar was important, while 85.51% considered learning to write characters was important and 68.27% thought that writing skills were important. Felder (1995) argued that effective language teaching must contain elements of interest. The material presented in each class should be a mixture of the definition of words, grammar rules and concepts (syntax, semantic information, language background and culture). Campbell and Zhao (1993) in their research explained that in learning a second language (L2) Chinese teachers and students revealed that grammar analysis was very important in learning a foreign language and doing exercises in the classroom was a good way to learn a foreign language in addition to other criteria.
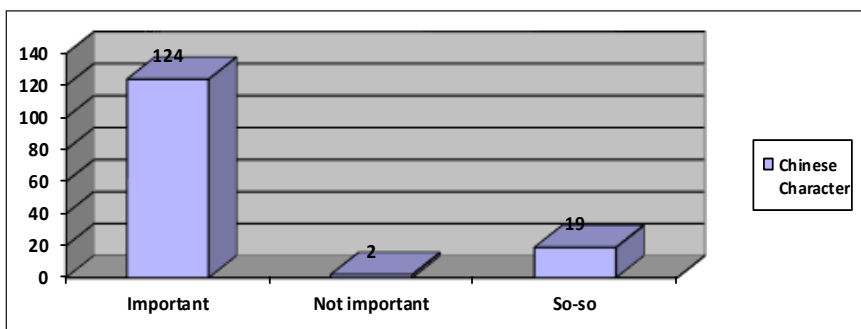
Figure 6. Importance of learning Chinese characters

A total of 92% of the students believed that learning Chinese characters was important even if they realised that the ability to learn Chinese characters is the most difficult language skill to acquire. This corresponded with Ye (2011)'s statement that writing characters is the most difficult skill based on his research among 914 students and 192 Chinese language teachers in the United States. Responses from both teachers and students indicated that in most Foreign Language (CFL) programmes in the US Chinese character learning is introduced in the first semester. In addition, Wang, Kong and Fallen (2014) emphasized that although learning Chinese is considered difficult, the students considered that learning is not only limited to learning the characters but also includes using it conversationally.
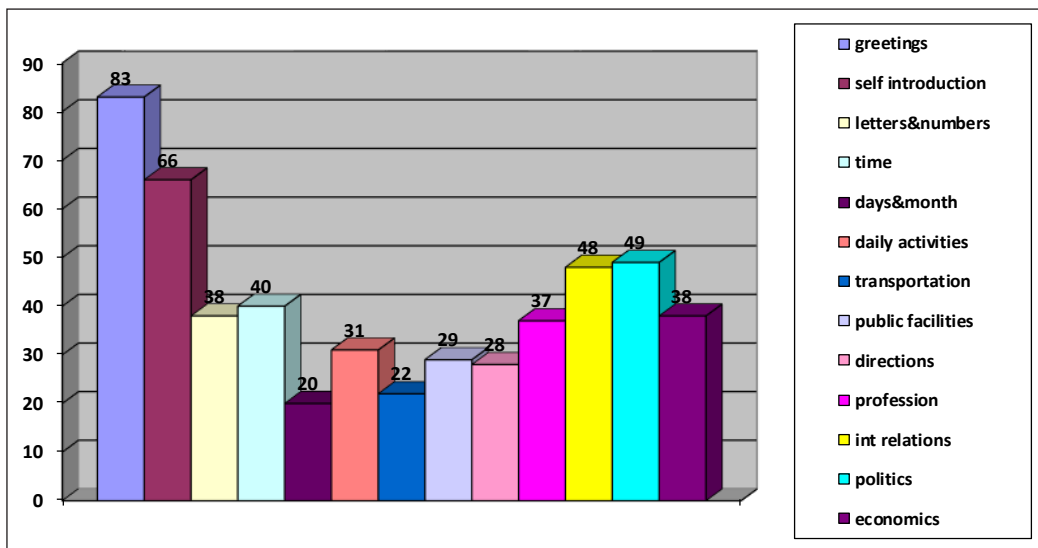
Figure 7. Chinese learning topics in sequence

This study also sought to identify the students' expectation of the topic sequence in Chinese language learning. The topics were sorted by the number of respondents choosing the topic. Based on the results of the questionnaire, 83 students believed that the first topic of study should be Greetings and 66 thought that the second topic should be Self Introduction, while 49 stated that the third topic should be Political Issues and 48 indicated that the fourth topic should be International Relations. In addition, 40 students chose time as the fifth topic and 38 chose Letters and Numbers and the Economy as the sixth topic. Both topics were considered equally important and they felt they could be studied together. Meanwhile, 37 thought that Professions should then follow. Daily Activities was chosen as the next topic by 31 respondents, while 29 chose Public Facilities and 28 chose Directions and Instructions and 22

chose Transportation. The last topic selected as it was considered the least important was Dates.

CONCLUSION

This paper successfully discovered the needs of IR students in terms of textbook selection for the learning of the Chinese language to increase their competencies and interest in learning a foreign language. The students' expectations of a suitable textbook were: (1) A suitable order of topics namely, Greeting, Introduction, Self-Introduction, Politic Issues, International Relations, Time, Letters and Numbers, the Economy, Professions, Daily Activities, Public Facilities, Directions and Instructions, Transportation and Names of Days and Months; (2) The textbook should include cultural knowledge and understanding; issues related to International Relations; formal and informal language; grammatical structure and the Chinese characters. Based on the results of this study, it is recommended that efforts to create an appropriate textbook for learning foreign languages based on students' needs and interests should be encouraged.

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REFERENCES

Ali, M. (2014). *Memahami riset perilaku dan sosial* [Understanding behavioral and social research]. Jakarta: PT. Bumi Aksara.

Arabski, J., & Wojtaszek, A. (2011). *Aspects of culture in second language acquisition and foreign language learning*. New York: Springer.

Byram, M., & Grundy, P. (2002). *Context and culture in language culture and learning*. Bristol, UK, Multilingual Matters Ltd.

Cakir, I. (2006). *Developing cultural awareness in foreign language teaching*.

Retrieved from http://www.tojde.anadolu.edu.tr/tojde23/pdf/article_12.pdf

Campbell, K. P., & Zhao, Y. (1993). The dilemma of English language instruction in the People's Republic of China. *TESOL Journal, 2*(4), 4–6.

Chen, S. (2013). An evaluation of SILL in Chinese language teaching. *Chinese Journal of Applied Linguistics*, *36*(3), 291–303.

Chisoni, G. (2015). The influence of Chinese culture on learning Chinese as a second language: A case study of Zimbabwean students learning Chinese as a second language. *International Journal of Language and Linguistics*, *3*(2), 33–39.

Cobb, T. (2007). Computing the vocabulary demands of L2 reading. *Language Learning & Technology*, *11*(3), 38–64.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative and mixed methods approaches* (3rd ed.). Los Angeles: SAGE Publication.

Ellis, R. (1997). The empirical evaluation of language teaching materials. *ELT Journal, 51*(1), 36–42.

Felder, R. M. (1995). Learning and teaching styles in foreign and second language education. *Foreign Language Annals*, *28*(1), 21–31.

Fink, A. (2002). *The survey kit* (2nd ed.)*.* Thousand Oaks, CA: Sage.

Heyneman, S. P. (2006). *The role of textbooks on a modern system of education: Towards high quality education for all*. Nashville, Tennessee: Vaderbilt University.

Hu, B. (2010). The challenges of Chinese: A preliminary study of UK learners' perceptions of difficulty. *The Language Learning Journal, 38*(1), 99–118.

Jiang, N. (2000). Lexical representation and development in a second language. *Applied Linguistics*, *21*(1), 47–77.

Kim, H., Sefcik, J. S., & Bradway, C. (2017). Characteristics of qualitative descriptive studies: A systematic review. *Research in Nursing & Health*, *40*(1), 23–42.

Lee, S. M. (2012). A study on the textbook designed to teach Korean as a foreign language. *Journal of Pan-Pacific Association of Applied Linguistics, 16*(1), 1–17.

Pearson, L. (2014). *The foundations of teaching Chinese as a foreign language: An investigation of late 19th century textbooks* (Master's thesis. University of Massachusetts, Amherst, United States). Retrieved 2016, December 12 from http://scholarworks.umass.edu/theses/1076

Reinders, H., & Balçikanli, C. (2011). Do classroom textbooks encourage learner autonomy? *Novitas-ROYAL (Research on Youth and Language)*, *5*(2), 265–272.

Richard, J. C. (2001). *The role of textbooks in a language program.* Retrieved December 12, 2016, from http://8pic.ir/images/s15uxmiv22ocvezrxp8b.pdf

Seguin, R. (1989). *The elaboration of school textbooks methodological guide*. Retrieved 2016, December 12 from http://www.unesco.org/education/pdf/55_16.pdf

Singhal, M. (1998). A comparison of L1 and L2 reading: Cultural differences and schema. *The Internet TESL Journal*, *4*(1). Retrieved March

16, 2016, from http://www.gse.uci.edu/ed168/resume.html

Muslich, M. (2010). *Text book writing*. Yogyakarta: Ar-ruzz Media.

Nguyen, T. T. M. (2011). Learning to communicate in a globalized world: To what extent do school textbooks facilitate the development of intercultural pragmatic competence?. *RELC Journal*, *42*(1), 17–30.

Noack R., & Gamio, L. (2015). The world's languages, in 7 maps and charts. Retrieved February 20, 2016, from https://www.washingtonpost.com/news/worldviews/wp/2015/04/23/the-worlds-languages-in-7-maps-and-charts/?utm_term=.cfe42542618b

Oates, T. (2014). Why textbooks count. *A policy paper*. University of Cambridge. Retrieved March 8, 2016, from http://www.maths4maths.co.uk/181744-why-textbooks-count-tim-oates.pdf

O'Neill, R. (1982). Why use textbooks. *ELT Journal*, *36*(2), 104–111. doi: 10.1093/elt/36.2.104

Tang, R. (1999). The place of "culture" in the foreign language cla. Retrieved December 12, 2016, Retrieved March 8, 2016, from http://iteslj.org/Articles/Tang-Culture.html.

Valdes, J. M. (1990). The inevitability of teaching and learning culture in a foreign language course. In B. Harrison (Ed.), *Culture and the language classroom* (pp. 20–30). Oxford: Modern English Publications/British Council.

Wang, A. H., Kong, A., & Farren, T. (2014). What learning environment factors motivate non-heritage language learners in middle grades to learn Chinese? *Electronic Journal of Foreign Language Teaching, 11*(2), 312–326.

Wen Cheng, W., Chie-Hung, L., & Chung-Chieh, L. (2010). Thinking of the textbook in the ESL/EFL Classroom. *English Language Teaching*, *4*(2), 91–96.

Ye, Lijuan. (2011). Teaching and learning Chinese as a foreign language in the United States: To delay or not to delay the character introduction. Retrieved December 12, 2015, from http://scholarworks.gsu.edu/cgi/viewcontent.cgi?article=1021&context=alesl_diss

Ying, Y., Lin, X., & Mursitama, T. N. (2017, October). Mobile learning based of Mandarin for college students: A case study of international department'sophomores. *11th International Conference on Information & Communication Technology and System (ICTS)* (pp. 281-286). Surabaya, Indonesia.

SOCIAL SCIENCES & HUMANITIES

Factors Related with Un-Islamic Behaviours of Muslim Youths in the Risky Groups in the Three Southern Border Provinces of Thailand

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ABSTRACT

The purpose of this study is to examine the factors related with un-Islamic behaviours of Muslim youth in risky groups of the three southern border provinces of Thailand. This study adopts the quantitative research approach. The data was collected from 1,800 participants who were selected by a multi-stage sampling technique. Data analysis using the R: a language and environment for statistical computing was employed using mean, standard deviation, Pearson's correlation and multiple linear regressions. The results showed that a lack of youth supervision by Muslim leaders, lack of participation in Islamic activities, lack of Islamic knowledge, and lack of Islamic upbringing were statistically significant related with the un-Islamic behaviours. The lack of youth supervision by Muslim leaders was clearly the most strongly related determinant in explaining the youths' un-Islamic behaviours (beta value = 0.32). Moreover, lack of Islamic upbringing, lack of Islamic knowledge, and lack of participation in Islamic activities also contributed to explain the variance in the youths' un-Islamic behaviours (beta values= 0.20, 0.11, and 0.10), respectively.

Keywords: Muslim, Un-Islamic behaviours, upbringing, supervision, youths

INTRODUCTION

Islam is not only a belief but also a way of life that combines belief and practice, worldly activities and Islamic religious activities into one inseparable entity. The way of life given by Allah is unique: Muslims all around the world strictly follow the text of the al-Quran and al-Hadith (Anmunajid 2010; Laeheem, 2013a). Islamic principles have signified

structures of behaviours and ways of living based on religious beliefs and principles for a harmonious life and these have been practiced vigorously among Muslims (Annadwee, 2004; Kaypan, 2014; Laeheem & Baka, 2010). At present, however, Muslim society is confronted with and adapting to the constant advancement of technology. Technology inevitably influences most Thai Muslim youth; they are no longer living their lives in accordance with conventional social standards or Islamic religious principles (Binkasun, 2001; Bungatayong, 2009; Laeheem, 2013b).

The above-mentioned situation is consistent with findings of past studies which revealed that Thai Muslim youths do not practice the principles of Islam and do not behave the way expected by Muslim society (Khagphong, 2004; Laeheem, 2013c). They are not interested in religious activities nor do they practice the daily religious rituals. Most are more fascinated with social entertainment broadcasts through various forms of media because these activities are more exciting and entertaining for them. It is almost impossible to protect Thai Muslim youths from indulging in Western culture and entertainment which is saturating present day society via all types of technological media (Din-a, 2008; Laeheem, 2012; Laeheem, 2014). As Laeheem and Baka (2010), and Mahama (2009) asserted, Thai Muslim youth had not led their lives according to Muslim social expectations and even contradict Islamic principles with their behaviour. This conduct turns into worse problems and is almost impossible to solve.

One should also bear in mind that Thai Muslim religion and culture co-exist with the majority Buddhist religion and culture in Thailand which is more liberal and the latter may influence the behaviour of Thai Muslim youth.

Moreover, the current Muslim way of living is no longer seen as being based on the principles of Islam. The current practices are based more on beliefs and ritual ceremonies which follow older generations. Thai Muslim youths' way of life is deprived of and even deviated from past practices. The generation gap is wider between parents and children because parents do not have time to teach and act as role model for their children regarding the Islamic way of life. Thai Muslim youth are therefore living a life led by the current course of fashion, influenced by media and friends. In this study, Thai Muslim youths living in this way are defined as "Thai Muslim youths with risky behaviours" (Laeheem, 2012; Rimpeng, 2008).

The un-Islamic behaviours in this study are the result of the action of Muslim youth that is not consistent with the expectations of Muslim society and their behaviours are incongruent with Islamic principles. For example, 1: Neglecting vital Islamic practices including obligatory daily prayers, almsgiving or *zakah*, fasting in the month of Ramadhan and recitation of the Qur'an. 2: Being involved in unbeneficial activities and activities harmful to others. 3: Unrestricted gender relationship that leads to promiscuity. 4: The tendency to value secular subjects more than Islamic subjects at schools. 5: Not

following Islamic dress code and preferring to imitate their idol pop stars. 6: Ignoring and giving no importance to religious activities, and 7: Giving no importance to and even avoiding doing community service and participating in community activities (Ayoub, 2004; Laeheem & Baka, 2010; Mahama, 2009).

There are many factors that can lead Muslim youth to behave in ways which are not in accordance with Islam. One important factor is not socializing via Islamic and family institutions. Past studies have shown a significant relationship between un-Islamic behaviours with Muslim youths who lack Islamic knowledge, have poor Islamic upbringing, have low interest in Islamic activities and lack supervision from Muslim leaders. (Laeheem, 2013a, 2014; Touthern, 2010). Most Muslim youths who have not been socialized with Islamic practices behave in such a way that weakens the faith by indulging in sins and taboos without feeling ashamed and doing it openly and behaving in many ways that are in conflict with Islamic principles. They lack knowledge and understanding of social norms and Islamic principles (Anmunajid, 2010; Mahama, 2009; Narongraksakhet, 1997). If young Muslims do not study or understand, or are not advised about Islamic principles, are apathetic about studying Islam, lack close Islamic upbringing, lack interest in Islamic activities, have parents and leaders negligent in looking after youth, this obviously results in behaviour inconsistent with Islam (Khagphong, 2004; Laeheem, 2013b; Mahama, 2009). Muslim

youth who are not encouraged to understand Islamic principles and teachings, and who have not been initiated into the Islamic socialization process, do not behave in accordance with Islam or its social norms (Laeheem & Madreh, 2014; Mahamad, Thongkum, & Damcha-om, 2008).

The present study aimed to examine the factors related with behaviours of Muslim youths of risky groups in the three southern border provinces of Thailand which are not in accordance with the Islamic way, including lack of mothers' breastfeeding, lack of Islamic upbringing, lack of Islamic knowledge, lack of participation in Islamic activities, and lack of youth supervision by Muslim leaders. Identifying these Muslim youths could assist Islamic religious organizations, social and human development authorities, and the government sector to introduce better strategies to promote more Muslim youths to behave in accordance with the Islamic way of life.

METHODS

Participants

The participants in this study were 1800 Muslim youths in the risky groups. The participants were from the three southern border provinces of Thailand; namely Pattani, Yala, and Narathiwat because 85.16% of the population in these three provinces are Muslim. The participants were selected using multi-stage sampling as follows: Stage 1: Districts were stratified into three strata: (1) districts where density

loss per victims of the violent unrest situation was high and very high; (2) districts where density loss per victims of the violent unrest situation was moderate; 3. districts where density loss per victims of the violent unrest situation was low (Center of Deep South Watch, 2015). Then two districts per region were selected using simple random sampling, totaling 18 districts. Stage 2: Two sub-districts per districts were selected using simple random sampling, totaling 36 sub-districts. Stage 3: Two villages per sub-districts were selected using simple random sampling, totaling 72 villages. Stage 4: 25 Muslim youth from each village were selected using simple random sampling, totaling 1,800 youth. The age of the participants was between 16 to 24 years (mean = 19.33, standard deviation = 1.59). 50.9% of the participants were female and 49.1% were male.

Data Collection and Research Instruments

The field research data was collected by both the researcher and experienced research assistants who were all local people of the areas in which the data was collected, and were staying in the target village. The questionnaire items were explained to the research assistants who were trained in the process and techniques of the collection of field data.

This study used a cross-sectional study design involving surveys of villages of Muslim communities. Muslim youth in the risky groups in a sample selected from the target population were studied. Verbal consent to participate in the study was obtained from the participants after assurance of confidentiality. The research assistants were asked to take care not to rush through the questionnaire and also to record responses accurately. Each individual interview lasted approximately 35-50 minutes. The research instrument was a questionnaire consisting of three parts: Part 1: General information on the subjects. Part 2: Five factors which include: lack of mothers' breastfeeding with 6 items, lack of Islamic upbringing with 8 items, lack of Islamic knowledge with 10 items, lack of participation in Islamic activities with 10 items, and lack of youth supervision by Muslim leaders with 10 items, each of which offered five response options: lowest, low, moderate, high, and the highest which were scored at 1, 2, 3, 4 and 5, respectively. The internal consistency was 0.81, 0.76, 0.78, 0.82, and 0.75, respectively. Part 3: Un-Islamic behaviours which consist of 20 items were scored on a five-point rating scale, the criteria for scoring from never, once in a while, rather often, often, and regularly (1, 2, 3, 4 and 5, respectively). The internal consistence of the questionnaire was found to be acceptable (Cronbach's alpha = 0.86).

Data Analysis

The five determinant variables in this study (include lack of mothers' breastfeeding, lack of Islamic upbringing, lack of Islamic knowledge, lack of participation in Islamic

activities, and lack of youth supervision by Muslim leaders) and the un-Islamic behaviours outcome were both continuous variables.

The R: a language and environment for statistical computing was employed to analyze the data in order to determine mean, standard deviation, Pearson's correlation, and multiple linear regressions. Descriptive statistics (mean and standard deviation) were used to describe the main variables of the study. Pearson's correlation test was used to analyze the correlations between the various determinant variables and the un-Islamic behaviours outcome. Multiple linear regression analysis was performed to examine whether the correlations between the un-Islamic behaviours outcome and determinants variables, and variables were eliminated from the model by the stepwise method.

Interpretation of Mean Score and Correlations

In this study, the mean score of un-Islamic behaviours outcome and determinants variables were interpreted based on the Best's criteria (Best, 1981): mean of 1.00 to 1.49 scored as lowest, 1.50 to 2.49 scored as low, 2.50 to 3.49 scored as moderate, 3.50 to 4.49 scored as high, and 4.50 to 5.00 scored as highest. The correlations between five determinant variables and the un-Islamic behaviours outcome were interpreted based on Cohen's criteria (Cohen, 1988): correlations .10 to .29 as small, correlations 0.30 to 0.49 as medium, and correlations 0.50 to 1.0 as large.

RESULTS

Table 1 shows the results of descriptive statistics of the un-Islamic behaviours outcome and five determinants variables. The Muslim youth in the risky groups in the three southern border provinces of Thailand had the un-Islamic behaviours at a high level (mean= 3.73). The mean score of the five determinant variables, a lack of youth supervision by Muslim leaders was at a high level (mean= 3.61) and a lack of Islamic knowledge, lack of Islamic upbringing, lack of mothers' breastfeeding, and lack of participation in Islamic activities were at moderate level (the mean scores were 3.41, 3.27, 3.23, and 3.19, respectively).

Table 1
Descriptive statistics of the determinants variables and the un-Islamic behaviours

Variables	Mean Score	S.D.	Interpretation
Un-Islamic behaviours	3.73	0.49	High
Lack of mothers' breastfeeding	3.23	0.55	Moderate
Lack of Islamic upbringing	3.27	0.53	Moderate
Lack of Islamic knowledge	3.41	0.93	Moderate
Lack of participation in Islamic activities	3.19	0.79	Moderate
Lack of youth supervision by Muslim leaders	3.61	0.64	High

Table 2 shows the results of Pearson's correlation analysis assessing the correlations between five determinant variables and the un-Islamic behaviours outcome. The lack of mothers' breastfeeding, lack of Islamic upbringing, lack of Islamic knowledge, lack of participation in Islamic activities, and lack of youth supervision by Muslim leaders were statistically significant correlation with the un-Islamic behaviours (p value = .000). The un-Islamic behaviours were a positive and large correlation with a lack of youth supervision by Muslim leaders ($r = 0.73$), lack of participation in Islamic activities ($r = 0.64$), lack of Islamic knowledge ($r = 0.62$), and lack of Islamic upbringing ($r = 0.53$), and was a positive and medium correlation with a lack of mothers' breastfeeding ($r = 0.43$).

Table 2

Correlations between the determinants variables and the un-Islamic behaviours

Variables	r	*p* value	95% (C I)	Interpretation
Lack of mothers' breastfeeding	0.43	0.000	0.40, 0.47	Medium
Lack of Islamic upbringing	0.53	0.000	0.50, 0.57	Large
Lack of Islamic knowledge	0.62	0.000	0.59, 0.65	Large
Lack of participation in Islamic activities	0.64	0.000	0.61, 0.67	Large
Lack of youth supervision by Muslim leaders	0.73	0.000	0.70, 0.75	Large

Table 3 shows analysis results of the final model of factors related with un-Islamic behaviours of Muslim youth in the risky groups in the three southern border province of Thailand. The multiple linear regression analysis revealed that four factors significantly related with un-Islamic behaviours were a lack of Islamic upbringing, lack of Islamic knowledge, lack of participation in Islamic activities, and lack of youth supervision by Muslim leaders (p value = .000).

Table 3

Reduced linear regression model of correlations between determinants variables and the un-Islamic behaviours outcome, final model

Determinants Variables	B	S.E.	*p* value	95% Confidence interval (CI)
Constant	1.23	0.05	0.000	1.12, 1.32
Lack of Islamic upbringing	0.20	0.15	0.000	0.18, 0.23
Lack of Islamic knowledge	0.10	0.01	0.000	0.08, 0.12
Lack of participation in Islamic activities	0.11	0.12	0.000	0.08, 0.14
Lack of youth supervision by Muslim leaders	0.32	0.15	0.000	0.29, 0.35

Note: F-statistic = 816.259***; p value = .000; Multiple R-squared = 0.645; Adjusted R-squared = 0.644; Residual standard error = 0.294; Degrees of freedom = 1795

The four determinant variables explain about 64.40% of the variance in un-Islamic behaviours. The largest beta coefficient obtained was 0.32 for lack of youth supervision by Muslim leaders. In other words the lack of youth supervision by Muslim leaders made the strongest unique contribution in explaining the un-Islamic behaviours among Muslim youth in the risky groups in the three southern border provinces of Thailand, when the variance explained by all the other determinant variables in the model was controlled for. It suggests that one standard deviation increase in the lack of youth supervision by Muslim leaders is followed by 0.32 standard deviation increase in the outcome of un-Islamic behaviours. The Beta value for a lack of Islamic upbringing, lack of participation in Islamic activities, and lack of Islamic knowledge were 0.20, 0.11, and 0.10, respectively. This means that the three determinant variables also made some contribution in explaining the variance in the un-Islamic behaviours among Muslim youth in the risky groups in the three southern border provinces of Thailand.

DISCUSSION

This study examined the correlations between un-Islamic behaviours among the Muslim youth of the risky groups in the three southern border provinces of Thailand and five determinant variables linked to a lack of mothers' breastfeeding, lack of Islamic upbringing, lack of Islamic knowledge, lack of participation in Islamic activities, and lack of youth supervision by Muslim leaders. Results revealed that the un-Islamic behaviours had a statistically significant correlation with four determinant variables, namely a lack of Islamic upbringing, lack of Islamic knowledge, lack of participation in Islamic activities, and lack of youth supervision by Muslim leaders, and the four determinant variables explain about 64.40% of the variance in un-Islamic behaviours. A lack of youth supervision by Muslim leaders was clearly the most strongly related determinant in explaining the un-Islamic behaviours among of Muslim youth in the risky groups. Moreover, the four determinant variables have been found to be related to negative behaviours of Muslim youth. Indeed, all the four determinant variables were indicative of young people who were not closely related with Islamic principles.

The main responsibility for the problem seems to lie with parents and Muslim leaders. They failed to teach and advise Muslim youth regarding social ethics and norms. Consequently, they could not behave in the way they were expected to by society and exhibited behaviours not in accordance with the Islamic way of life. Notably, it is said that socialization is the process of transferring knowledge, thoughts, attitudes, ideologies, cultures and personalities to make individuals behave in the way the society desires and ways of living based on religious principles (Adivatanasit, 2002; Cohen & Orbuch, 1990; Popenoe, 1993; Thitiwattana, 2004). Socialization enables youth to understand and adopt the values and social norms of the society they live

in, and to behave in a way according to religious beliefs (Bhanthumnavin, 2003; Grusec, 1992; Sereetrakul, 2009; Thitirat, 2004). Muslim youths who are not studied in Islamic principles, who do not strictly adhere to religious activities and possess Islamic morality, who lack interest in Islamic activities, and whose parents and leaders are negligent in looking after youth cannot behave in accordance with Islam (Laeheem, 2013a; Mahamad, Thongkum, & Damcha-om, 2008). Muslim youths who do not study, or understand, and who do not receive advice about Islamic principles and social norms, who lack close Islamic upbringing, who lack interest in Islamic activities, and who lack sufficient guidance behave discordantly with Islamic principles and beliefs. Socialization in Islam, is the process of developing personality, habit, morality, and manner according to Islamic principles and beliefs in order for Muslim to have the right way of life, behave in accordance with the Islamic way, and to build a peaceful and happy society, and to bring in true happiness based on Islamic morality and ethics (Khagphong, 2004; Laeheem, 2013b; Mahama, 2009). Therefore, when Muslim youths are not exposed to socialization from parents and Muslim leaders it has a negative influence on their behaviour.

In addition, Muslim youths of the Southern provinces might imitate their peers' behaviour and might then fall into the risky behaviour group in order to gain acceptance. Muslim youth often use the same behavioural tactics when observing

their peers; thus they model the behaviour which is not in accordance with Islam. This is consistent with the studies which found that peer modeling of un-Islamic behaviours promotes the development of youths' negative behaviour (Khagphong, 2004; Laeheem, 2013c; Mahama, 2009). Most human behaviour is learned observationally through copying: from observing others one forms an idea of how new behaviours are performed, and on later occasions this coded information serves as a guide for action (Bandura & Walters, 1963). Youths pay attention to what their peers are doing and saying in order to reproduce the model's behaviour (Allen & Santrock, 1993).

CONCLUSION AND RECOMMENDATIONS

The lack of Islamic upbringing, lack of Islamic knowledge, lack of participation in Islamic activities, and lack of youth supervision by Muslim leaders had a statistically significant correlation with the un-Islamic behaviours. A lack of youth supervision by Muslim leaders was clearly the most strongly related determinant in explaining the un-Islamic behaviours among of Muslim youth in the risky groups.

Findings from this study should help in the development of prevention and intervention policies in Muslim society and assist Islamic religious organizations and the government sector to introduce better strategies for reducing the problem. Parents are most important in providing leadership and direction for the successful prevention and intervention of behaviours

in accordance with the Islamic way. They should provide close attention and talk regularly with their children about their feelings and relationships with friends. They should work in partnership with Muslim leaders to encourage positive behaviour. Muslim leaders are the next most important actors for preventing the prevalence of behaviours not in accordance with the Islamic way. Muslim leaders have to be positive in forming concrete policies and strategies for promoting and supporting Thai Muslim youth to behave in accordance with Islamic principles. For example, these should be a policy on instilling awareness in Thai Muslim youth to behave according to the Islamic way of life and follow the Prophet, and/or a policy on Islamic moral training camps to be held regularly and continuously in different communities; a policy on organizing activities and training to give knowledge about the religion and practice according to Islamic principles for youth and their parents; and a policy on promoting and developing the family institution to strengthen it so that it can control children and keep them in the Islamic frame of reference.

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REFERENCES

Adivatanasit, C. (2002). *Buddhist sociology*. Bangkok, Thailand: Mahachulalongkornrajavidyalaya.

Allen, L., & Santrock, J. (1993). *The contexts of behaviour psychology*. Madison, WI: Madison Brown & Benchmark Press.

Anmunajid, S. (2010). *Prohibited relationships*. Retrieved May 3, 2016, from http://www.majlis-ilmi.org/islam/modules.php?op=modload&name= Sections&file= index&req= viewarticle&artid=1&page=1

Annadwee, A. (2004). *Dear Muslim intellectuals*. Retrieved May 3, 2016, from http://www.majlis-ilmi.org/ slam/modules.php?op= modload&name = Sections&file = index&req = viewarticle&artid =8&page=1

Ayoub, M. (2004). *Islam: Faith and history*. London, UK: One world Publication.

Bandura, A., & Walters, R. H. (1963). *Social learning and personality development*. New York, US: Holt Rinehart and Winston.

Binkasun, B. (2001). *Islam: Peacefulness to life*. Bangkok, Thailand: Al-Ameen.

Bhanthumnavin, D. (2003). Family strategies for alleviating moral social crisis Thai. *Journal of Development Administration, 50*(3), 1–20.

Bungatayong, M. (2009). *Activities for inculcating Islamic ethics in secondary students at Islamic private school in the Educational Area I, Yala* (Unpublished Master's thesis). Prince of Songkla University, Pattani.

Center of Deep South Watch. (2015). *The data and trends of the situation severity in the South*. Pattani, Thailand: Center of Deep South Watch.

Chaiprasit, K., Chansawang, W., & Pergmark, P. (2005). Islamic scripture and practice on sexual behaviours among high school

Muslim adolescents: Narathiwat province. *Songklanakarin Journal of Social Sciences and Humanities, 11*(Suppl.), 71–80.

Cohen, J., & Orbuch, T. (1990). *Introduction to sociology*. Singapore: McGraw Hill.

Din-a, A, (2008). *The crisis of southern Thailand "It can be solved"*. Songkhla, Thailand: Max Media Y2k Press.

Grusec, J. E. (1992). Social learning theory and developmental psychology: The legacies of Robert Sears and Albert Bandura. *Development Psychology, 28*(5), 776–786.

Kaypan, A. (2012). *States of problems and inculcation of Islamic ethics and morals in students at secondary school in Satun prov*ince (Unpublished master's thesis). Prince of Songkla University, Pattani.

Khagphong, P. (2004). *Islamic faith on behaviour of child breeding of Thai Muslim family in Bangkok* (Unpublished master's thesis). Prince of Songkla University, Pattani.

Laeheem, K., & Baka, D. (2010). A study of the Thai Muslim youth's way of life to maintaining peace in the three southern border provinces of Thailand. *Songklanakarin Journal of Social Sciences and Humanities, 16*(6), 973–988.

Laeheem, K., & Madreh, A. (2014). Youth supervision based on Islam provided by Muslim leaders in southern Thailand. *Kasetsart Journal: Social Science, 35*(1), 92–102.

Laeheem, K. (2012). Youth supervision based on the Islamic beliefs of Muslim leaders in three southern province communities. *Kasetsart Journal: Social Sciences, 33*(3), 454–463.

Laeheem, K. (2013a) The Islamic way of youth care by Muslim leaders in the three southern-border provinces of Thailand. *Asian Social Science, 9*(10), 160–168.

Laeheem, K. (2013b). Needs for behavioural refinement based on Islamic principles among Muslim juveniles with risky types of behaviour in three southern-border provinces of Thailand. *Kasetsart Journal: Social Science, 34*(1), 126–138.

Laeheem, K. (2013c). Reception of behaviour supervision based on Islamic belief among Muslim adolescents in the three southern-border provinces, Thailand. *Kasetsart Journal: Social Sciences, 34*(2), 323–334.

Laeheem, K. (2014). Factors associated with Islamic behaviour among Thai Muslim youth in the three southern border provinces, Thailand. *Kasetsart Journal: Social Sciences, 35*(2), 356–367.

Mahama, M. (2009). *Islam: Way of life*. Songkhla, Thailand: Po-bard.

Mahamad, F., Thongkum, P., & Damcha-om, M. (2008). Roles of family in cultivating morality for youth in the Islamic private schools, Pattani province. *Songklanakarin Journal of Social Sciences and Humanities, 14*(1), 35–54.

Narongraksakhet, I. (1997). *History of Islamic education*. Pattani, Thailand: College of Islamic studies, Prince of Songkla University.

Popenoe, D. (1993). *Sociology*. Englewood Cliffs, NJ: Prentice-Hall.

Rimpeng, L. (2008). *Ethical factors of Muslim students in higher educational institute* (Unpublished master's thesis). Prince of Songkla University, Pattani.

Sereetrakul, W. (2009). *Factors affecting family solidarity in the opinions of Thai teenagers* (Unpublished master's thesis). Ramkhamhaeng University, Bangkok.

Thitirat, P. (2004). *Human and society*. Bangkok, Thailand: Kasetsart University.

Thitiwattana, P. (2004). *Human and sociology*. Bangkok, Thailand: Kasetsart University.

Touthern, M. (2010). *States, problems, and inculcation of Akhlaq into Islamic private schools's students under private education office, Pattani province* (Unpublished Master's thesis). Prince of Songkla University, Pattani.

Construction of a Socio-Economic Status (SES) Index in Peninsular Malaysia Using the Factor Analysis Approach

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ABSTRACT

The state of a country's economy plays an important role in helping it achieve developed nation status. Hence, studies on poverty, inequality and socio-economic matters should use precise measures in order to provide accurate understanding of a country's development. Accurate measures can also provide information on progress already achieved and aid in planning for future improvement and development. This study focusses on constructing a socio-economic status (SES) index and describes a statistical procedure to derive the SES index in a multivariate context for every district in Peninsular Malaysia. Factor analysis is applied to construct the SES index. Data on 19 variables measuring multiple aspects of socioeconomic status such as household amenities, basic facilities, education level and labour force are factorised into three factors that explain 76% of the total variation. The high SES index is situated in Kuala Lumpur, Pulau Pinang, Selangor and some regions in Kedah, Perak, Melaka, Negeri Sembilan and Johor, while the low SES index is situated in areas in Kelantan, Terengganu and some rural areas in Kedah and Pahang. The findings can facilitate the relevant authorities in taking proactive steps to prioritise the development of the relevant areas in order to reduce the socio-economic gap between districts in Peninsular Malaysia.

Keywords: Factor analysis, principal component extraction method, socio-economic status (SES) index

INTRODUCTION

A socio-economic status (SES) index is a total measure of the social and economic standing of an individual or area that involves a combination of many variables that capture living standards. An SES index is useful for studying the standard of living of the public and the country's progress. It is also used as an outcome measure to study

the relationship between SES and various health behaviours, education and social problems like crime and mortality. Numerous individual and areal measures of SES have been constructed previously, variously termed as socio-economic status index, deprivation index and inequality index. For instance, Australia uses the Socio-Economic Indices for Australia (SEIFA) (Castles, 1994), Jarman index (Jarman, 1983), Townsend index (Townsend, Simpson, & Tibbs, 1985), while the Carstairs index is used in the United Kingdom (Carstairs, 1995; Carstairs & Morris, 1989), New Zealand uses the index of socio-economic deprivation (NZiDep) (Salmond, Crampton, & Sutton, 1998) and Canada uses the Pampalon index and Can-Marg index (Matheson, Dunn, Smith, Moineddin, & Glazier, 2014; Pampalon, Hamel, & Gamache, 2009).

In order to construct an SES index, different researchers have used different numbers of variables. Townsend and Carstairs' index incorporates four variables; three of the variables are similar including unemployment, non-car ownership and household overcrowding, while for the fourth variable, the Carstairs index substitutes non-home ownership with low social class. The NZiDep91 are based on seven variables, which are income, employment, transport, living space, home ownership, qualification and support. Besides that, there are researchers who incorporate more than 10 variables in the construction of an SES index. For instance, Vyas and Kumaranayake (2006) used 26 variables,

while Lalloué et al. (2013) used 20 variables for their own index study. The purpose of including various variables is to ensure deeper understanding of socio-economic differentiation multidimensionally, which reflects the pattern of unequal distribution of resources and population. In general, there is no previous study stating the best indicator in measuring SES. The formation of an SES index is based on the objective of the researchers as it is hard to assign a universal measure of SES that would be helpful in all areas. However, most of them have used the demographic and socioeconomic data that were presented in the national census data. Variables such as durable assets (e.g. car, motorcycle, TV), infrastructure and housing characteristics (e.g. electric, source of water, sanitation facility), education level, labour force, marital status, population density and urbanisation are repeatedly used (Holt & Lo, 2008; Howe, Hargreaves, & Huttly, 2008; Krishnan, 2010; Lalloué et al., 2013; Rahman & Zakaria, 2012; Sanusi, 2008; Vyas & Kumaranayake, 2006).

The inclusion of many variables in an SES index may lead to the presence of multicollinearity. A review of the literature shows that recently most researchers have used Factor Analysis (FA) and Principal Component Analysis (PCA) to construct an SES index and, at the same time, to avoid the multicollinearity problem. For example, Earnest et al. (2015); Filmer and Pritchett (2001); Gwatkin, Rutstein, Johnson, Suliman, Wagstaff and Amouzou (2007); Vyas and Kumaranayake (2006) and used the PCA to construct an SES

index while Holt and Lo (2008); Krishnan (2010); Sahn and Stifel (2003); Salmond et al. (2006), and Zakaria (2014) used FA to construct their index. Both methods are useful in expressing a set of variables into a smaller number of factors but the approaches are slightly different. DeCoster (1998) pointed out two main difference between FA and PCA. The first was in terms of direction of the influence. FA assumes that the measured responses are based on the underlying factors, while in PCA, the principal components are based on the measured responses. Second, FA assumes that the variance in the measured variables can be decomposed into that accounted for by common factors and by unique factors, while PCA cannot decompose the variance as it is defined as linear combinations of the measurements.

Apart from PCA and FA, there are various methods for SES index construction such as correspondence analysis, multiple correspondence analysis, multivariate regression and fuzzy. Cortinovis, Vella and Ndiku (1993) used correspondence analysis to derive an SES measure. However, the analysis can only be used for categorical data both nominal and ordinal and also for continuous data, but the data need to be reorganised into range. Meanwhile, according to Howe et al. (2008), multiple correspondence analyses were analogous to PCA but were for discrete data. Marí-Dell'Olmo et al. (2011); Pornet et al. (2012) used others methods such as the fuzzy set composite indices and also Bayesian factor analysis, respectively.

Due to the limited number of studies related to an SES index construction in Malaysia, this study aimed to construct an SES index based on the geographical and socio-economic factors in Peninsular Malaysia by including variables that are provided in census data. The index was constructed using a method that is widely used, which is factor analysis to extract the latent variables from multiple perspectives, weigh each factor appropriately and calculate a single number index for each district in Peninsular Malaysia. The result of this study, it is hoped, will further assist policy-makers in planning regions optimally and effectively so that all districts will receive an appropriate resource distribution.

MATERIALS AND METHODS

Malaysia is a country on the continent of Asia, specifically in Southeast Asia, that comprises Peninsular Malaysia and the states of Sabah and Sarawak in Borneo. However, this study only covers Peninsular Malaysia, which is to the west of Borneo, due to the equitable development of this region and data availability.

In this study, the administrative district is used as the unit of analysis. In year 2000, Peninsular Malaysia consisted of 82 administrative districts. The demographic and socio-economic data for year 2000 were obtained from the national population census report published by the Department of Statistics Malaysia, while the crime data were obtained from the Royal Malaysia Police. Census data, which are collected every 10 years, are a source of data that

contain much information on the number of persons and households together with a wide range of demographic and socio-economic characteristics in Malaysia. They also provide information on the availability of basic amenities. For the purpose of this study, 20 variables related to household amenities, basic facilities, school attendance, education level and labour force were selected from the available data to construct the SES index based on the indicators that were most often used in the literature in addition to several other relevant variables. The 20 variables are as follows:

1. Percentage of households that have a car (car)

2. Percentage of households that have a motorcycle (motorcycle)

3. Percentage of households that have an air-conditioner (air-conditioner)

4. Percentage of households that have a washing machine (washing machine)

5. Percentage of households that have a telephone (telephone)

6. Percentage of households that have a television (television)

7. Percentage of households that have a video (video)

8. Percentage of households that use tap water (water)

9. Percentage of households that have 24-hour electricity supply (electric)

10. Percentage of households that have proper toilet facilities (toilet)

11. Percentage of residents who have tertiary education (tertiary education)

12. Percentage of persons who did not attend school (school attendance)

13. Percentage of married persons who are single mothers (single mother)

14. Percentage of persons who are married (married)

15. Mortality rate per 1000 persons of the population (mortality)

16. Percentage of persons of age 15 to 64 years old who are professional workers (professional)

17. Percentage of persons of age 15 to 64 years old who are engaged in basic work (basic work)

18. Property crime rate per 1000 persons of the population (crime)

19. Percentage of urbanisation (urbanisation)

20. Population density (population density)

In this study, since there is a relatively high number of variables in constructing the SES index, factor analysis was used to create the index with application of SPSS 16.0. The essential purpose of factor analysis is to analyse interrelationships among a large number of variables and to classify variables into their common factors. As a result, the original number of variables can be condensed into a smaller set of dimensions with a minimum loss of information.

The method for constructing the SES Index is explained in several steps given as follows:

Step 1: Creating variables and data screening

The variables used in this study were in the form of percentage and rate to avoid having undue influence on the overall index since different districts had a different number of household and population. Variables should roughly be normally distributed to derive a preferred solution with no outliers for the data related to each variable since factor analysis is sensitive to outliers.

Step 2: Measuring the internal consistency of a scale

Based on Tawakol and Dennick (2011), internal consistency should be determined before a test can be employed for research or examination purposes to ensure validity. Thus, Cronbach's alpha that was developed by Cronbach (1951) was used to measure the internal consistency and it was expressed as a number in the range of 0 to 1. The Cronbach's alpha is defined as:

$$\alpha = \frac{n}{n-1}(1 - \frac{\sum s_v^2}{s_{test}^2})$$

[1]

Where,
n = Number of items
s_v^2 = Variance of the vth item
s_{test}^2 = Variance of the total score formed by summing all the items

Step 3: Checking of assumptions

Before proceeding to factor analysis, two main tests were used for testing the appropriateness of factor analysis namely, the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test. The KMO test was used to measure sampling adequacy and interrelationships among variables, while Bartlett's test was used to determine whether the variables were correlated or not. Factor analysis is appropriate if the KMO value is greater than 0.5 and if Bartlett's test is significant.

Step 4: Determining number of factors to be retained and undergoing factor rotation

The factors were extracted using the principal component method and administering varimax rotation with Kaizer normalisation although there were other options. Using the principal component method for extraction allows the number of factors extracted to be defined by the user or to be regulated to the Eigenvalue rule or to be obtained via scree plot. The Eigenvalue is the variance extracted by the factors. Under the Eigenvalue rule, only those factors with an Eigenvalue of 1.0 and above are retained. Meanwhile, for scree plotting, the number of factors to be kept should be equal to the number of factors before the bending point. Besides that, the number of factors can be determined by keeping the factors, which in total, account for about 60-

80% of the variance. Meanwhile, varimax rotation is used to minimise the number of variables that have a high loading on the first factor.

Step 5: Index calculation

The variables were standardised using the following standardisation so that the standardised observed values would range between zero and one.

$$Z_{ik} = \frac{x_{ik} - \min(x_{ik})}{\max(x_{ik}) - \min(x_{ik})} \quad [2]$$

Where, x_{ik} is the actual observed value in district i for variable k and $\min(x_{ik})$ and $\max(x_{ik})$ are the minimum and maximum observed value for variable k, respectively. This standardisation method was chosen as it can show the gap between the observed area and the area that has the lowest observed value. Zero corresponds to the lowest level and one corresponds to the highest level in each set of variables (Sanusi, 2008). Meanwhile, the index coefficient, $\mathbf{W}_{kf}$, was computed by multiplying the inverse matrix of original variables correlation, $\mathbf{R}_{kk}^{-1}$, with the rotated component matrix, $\mathbf{S}_{kf}$:

$$\mathbf{W}_{kf} = \mathbf{R}_{kk}^{-1}\mathbf{S}_{kf} \quad [3]$$

Then, the standardised observed values were multiplied by the matrix of factor score coefficient, $\mathbf{W}_{kf}$, to obtain the estimated factor indices for each district, $\mathbf{F}_{if}$:

$$\mathbf{F}_{if} = \mathbf{Z}_{ik}\mathbf{W}_{kf}$$
$$= \sum_{k=1}^{K} Z_{ik}W_{kf} \quad [4]$$

Where, K is the number of variables in the measured factor.

Then, based on Fukuda, Nakamura and Takano (2007), the index value for each factor was summed up to get the socio-economic index:

$$\text{SES Index} = \sum_{f=1}^{c} F_{if} \quad [5]$$

Where, c is the number of reduced factors.

RESULTS AND DISCUSSION

The results of this analysis are given in Table 1 to Table 10. Table 1 shows the Cronbach's alpha value for reliability checking, while Table 2 and Table 3 show the changes in the value of Cronbach's alpha when items were deleted. Table 1 shows the Cronbach's alpha value when all variables were included i.e. 0.123. The small value was neither good nor moderate; hence, some variables needed to be dropped for factor analysis. The 'Cronbach's Alpha if Items Deleted' column in Table 2 shows that the Cronbach's alpha was 0.865 if variable population density were deleted and only several changes would happen if another item were deleted. Hence, only population density was dropped; this improved the Cronbach's alpha value to 0.865, which

is considered acceptable according to Tavakol and Dennick (2011). Statistically, the best reduced set had 19 variables. This conclusion was further supported by examination of the variability of the values of the Cronbach's alpha when individual variables were deleted for the reduced set of 19 variables. Based on Table 3, the restricted values of alpha varied from 0.834 to 0.889, close to the overall value of Cronbach's alpha, suggesting none of those 19 variables were to be deleted and they were internally consistent.

Table 1
Cronbach's alpha value for reliability checking

	Cronbach's alpha
By including all variables	0.123
After deleting variable population density	0.865

Table 2
Cronbach's alpha if items deleted by including all variables

Variable	Cronbach's Alpha if Item Deleted
Car	0.110
Motorcycle	0.136
Air-Conditioner	0.113
Washing machine	0.116
Telephone	0.111
Television	0.121
Video	0.106
Water	0.117
Electricity	0.122
Toilet	0.099
Tertiary education	0.118
School attendance	0.127
Single mother	0.124
Married	0.122
Mortality	0.125
Professional	0.121
Basic work	0.123
Crime	0.115
Population density	0.865
Urbanisation	0.102

Table 3
Cronbach's alpha if item deleted after deleting variable population density

Variable	Cronbach's Alpha if Item Deleted
Car	0.841
Motorcycle	0.889
Air-Conditioner	0.850
Washing machine	0.845
Telephone	0.837
Television	0.857
Video	0.834
Water	0.844
Electricity	0.864
Toilet	0.847
Tertiary education	0.861
School attendance	0.878
Single mother	0.869
Married	0.862
Mortality	0.870
Professional	0.865
Basic work	0.864
Crime	0.859
Urbanisation	0.849

Table 4 shows the result of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. For this study, the KMO value was 0.858, signalling that a factor analysis of the variables could proceed. Furthermore, the results of Bartlett's test showed a significant value of <0.001, a value that was small enough to reject the null hypothesis although it was at the 1% significant level. This implied that the strength of the relationship among the variables was strong and the correlation matrix was not an identity matrix. Hence, these diagnostic procedures indicated the suitability of factor analysis for the data.

Table 4
KMO measure of sampling adequacy and Bartlett's Test of Sphericity

KMO Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
	Chi-Square	**Df**	**Sig.**
0.858	**1787.99**	**171**	**0.000**

In the initial stage of factor analysis, the pattern of intercorrelations between the studied variables was examined through a correlation matrix. Variables that were influenced by the same factor were highly correlated compared to variables from different factors. Based on the correlation matrix of the 19 variables (refer Appendix), the variables car, air-conditioner, washing machine, video, water, toilet and school attendance were highly correlated to each other, while the variable motorcycle was highly correlated to the variables tertiary education and professional.

Table 5 shows the Eigenvalue and the percentage of total variation in line with the number of factors. The table shows that at least two factors are necessary for a minimum of 60% of total variation and at most, four factors can be retained as four factors gave an Eigenvalue of more than 1. However, four was not chosen

Table 5
Total variance derived from principal component analysis extraction method

Factor	Initial Eigenvalues		
	Eigenvalue	% of Variance	Cumulative Variance %
1	9.868	51.936	51.936
2	2.845	14.973	66.909
3	1.809	9.523	76.432
4	1.012	5.324	81.756
5	0.652	3.434	85.127
6	0.593	3.123	88.249
7	0.456	2.400	90.649
8	0.423	2.225	92.874
9	0.264	1.389	94.263
10	0.247	1.299	95.562
11	0.199	1.046	96.608
12	0.169	0.888	97.496
13	0.116	0.610	98.106
14	0.103	0.544	98.651
15	0.080	0.422	99.073
16	0.058	0.304	99.377
17	0.056	0.292	99.669
18	0.035	0.184	99.854
19	0.028	0.146	100.000

because the variables that were represented in the four factors were relatively not meaningful and difficult for naming. For this reason, the number of factors for extraction was set at three. The Eigenvalues of the extracted factors were 9.868, 2.845 and 1.809, respectively, giving 76.432% of the total variance.

Once the factor extraction was done, it was important to check the communalities. The communalities represented the proportion of variance in the original variables that was accounted for by the factor solution after the extraction process. If the communalities are low, the extracted factors account for only a small part of the

Table 6
Communalities

Variable	Extraction
Car	**0.910**
Motorcycle	**0.711**
Air-Conditioner	**0.815**
Washing machine	**0.755**
Telephone	**0.859**
Television	**0.864**
Video	**0.926**
Water	**0.722**
Electricity	**0.771**
Toilet	**0.872**
Tertiary education	**0.809**
School attendance	**0.821**
Single mother	**0.825**
Married	**0.754**
Mortality	**0.591**
Professional	**0.896**
Basic work	**0.410**
Crime	**0.661**
Urbanisation	**0.550**

variance and more factors may be retained. Table 6 shows that the communality value for all the variables are high, implying that these particular variables were well reflected via the extracted factors; hence, the three factors were reliable. For instance, it can be said that 91% of the variance for the variable car can be explained by retaining factors after extraction.

The total variance explained by factor and the factor matrix after varimax rotation are presented in Table 7 and Table 8, respectively. Comparing the extraction results shows that the percentage of variance of the first factor with rotation was smaller compared to without rotation. Meanwhile, based on the factor matrix, the number of variables that had high loading in the first factor decreased after rotation. These outputs indicated that varimax rotation altered the pattern of factor loading by minimising the number of variables that had high loading on the first factor and maximising the contrast between the factors. After rotation, factor 1 accounted for 37.53% of the variability, factor 2 accounted for 27.40% of the variability and factor 3 accounted for 11.49% of the variability, which finally explained 76.43% of the total variance in all 19 variables. The result inferred that the three factors could explain over 75% of the information contained in the original variables.

Focussing on the rotated factor matrix in Table 8, it can be seen that the factor loading in the matrix represented the correlation of the original variables with the factor,

Table 7
Total variance explained before and after varimax rotation

Factor	Extraction Sums of Squared Loading			Rotation of Squared Loading		
	Eigenvalue	% of Variance	Cumulative Variance %	Eigenvalue	% of Variance	Cumulative Variance %
1	9.868	51.936	51.936	7.132	37.534	37.534
2	2.845	14.973	66.909	5.207	27.404	64.938
3	1.809	9.523	76.432	2.184	11.494	76.432

Table 8
Factor matrix

Variable	Factor Matrix			Rotated Factor Matrix		
	1	2	3	1	2	3
Car	**0.947**	-0.116	-0.004	**0.692**	0.646	-0.113
Motorcycle	-0.493	**0.672**	-0.118	-0.014	**-0.772**	0.340
Air-Conditioner	**0.889**	-0.118	0.064	0.616	**0.659**	-0.035
Washing machine	**0.822**	0.281	0.004	**0.793**	0.329	0.132
Telephone	**0.847**	0.376	0.007	**0.870**	0.271	0.167
Television	**0.643**	0.591	0.306	**0.724**	0.155	0.562
Video	**0.938**	0.057	-0.199	**0.836**	0.440	-0.182
Water	**0.712**	0.412	-0.215	**0.847**	0.071	0.016
Electricity	0.364	0.335	**0.722**	0.277	0.312	**0.773**
Toilet	**0.913**	-0.062	-0.179	**0.746**	0.514	-0.226
Tertiary education	**0.720**	-0.434	0.317	0.243	**0.866**	-0.007
School attendance	**-0.902**	-0.067	0.043	**-0.757**	-0.497	0.026
Single mother	-0.574	0.332	**0.630**	-0.470	-0.289	**0.722**
Married	**0.678**	0.363	-0.398	**0.853**	0.000	-0.161
Mortality	-0.364	**0.593**	0.350	-0.073	-0.467	**0.606**
Professional	**0.584**	-0.506	0.542	0.030	**0.935**	0.145
Basic work	0.263	**0.583**	-0.059	**0.532**	-0.235	0.268
Crime	**0.721**	-0.286	0.255	0.348	**0.735**	0.010
Urbanisation	**0.740**	-0.047	0.010	**0.568**	0.473	-0.067

ranging from -1 to +1. Positive values indicate that the variables had a proportional relationship with the factor, while negative values indicate that the variables had an inverse relationship with the factor. A high absolute value of the loading means that the factor contributes more to the variable. The values given in bold give an indication as to which factor the variable belongs. Factor 1 consisted of the variables car, washing machine, telephone, television, video, water, toilet, school attendance, married person, basic work and urbanisation, while Factor 2 consisted of motorcycle, air-conditioner,

tertiary education, professional worker and property crime. The last factor, Factor 3, consisted of electricity, single mother and mortality. Factor 1 may represent the factor for basic household needs, Factor 2 may represent middle-class households and the third factor may represent social factors.

Table 9
Factor score coefficient matrix, W_{kf}

Variable	Factor		
	1	2	3
Car	0.056	**0.082**	**-0.030**
Motorcycle	**0.100**	-0.205	**0.098**
Air-Conditioner	**0.034**	0.105	**0.012**
Washing machine	0.116	**-0.009**	**0.056**
Telephone	0.140	**-0.036**	**0.065**
Television	0.108	**-0.015**	**0.252**
Video	0.122	**-0.009**	**-0.087**
Water	0.172	**-0.107**	**-0.024**
Electricity	**-0.023**	**0.120**	0.387
Toilet	0.093	**0.024**	**-0.098**
Tertiary education	**-0.080**	0.228	**0.060**
School attendance	-0.089	**-0.034**	**0.004**
Single mother	**-0.090**	**0.046**	0.344
Married	0.192	**-0.145**	**-0.116**
Mortality	**0.029**	-0.080	0.255
Professional	**-0.143**	0.295	**0.149**
Basic work	0.139	**-0.130**	**0.085**
Crime	**-0.038**	0.173	**0.052**
Urbanisation	0.054	**0.052**	**-0.017**

Next, as discussed in the methodology presented above, factor indices were obtained by multiplying the inverse matrix of coefficient correlations with a factor score coefficient matrix as presented in Table 9. The bold numbers represent the score coefficient according to their respective

factor. Since the number of factors extracted was three, the factor indices calculated for each district was separated into three parts. The indices for the first factor, F_{i1}, second factor, F_{i2}, and third factor, F_{i3} were calculated as follows:

$$F_{i1} = \sum_{k=1}^{11} Z_{ik} W_{k1},$$

$$F_{i2} = \sum_{k=1}^{5} Z_{ik} W_{k2},$$

$$F_{i3} = \sum_{k=1}^{3} Z_{ik} W_{k3},$$

For instance, the indices for Factor 1, Factor 2 and Factor 3 in the Federal Territory of Kuala Lumpur were calculated as:

$$
\begin{aligned}
F_{kl1} = &(0.805 \times 0.056) + (0.789 \times 0.116) \\
&+ (0.776 \times 0.140) + (0.838 \times 0.122) \\
&+ (0.997 \times 0.172) + (0.981 \times 0.093) \\
&+ (0.063 \times -0.089) + (0.684 \times 0.192) \\
&+ (0.350 \times 0.139) + (1.000 \times 0.054) \\
&\approx 0.918
\end{aligned}
$$

$$
\begin{aligned}
F_{kl2} = &(0.000 \times -0.205) + (0.771 \times 0.105) \\
&+ (0.673 \times 0.228) + (0.816 \times 0.295) \\
&+ (1.000 \times 0.173) \approx 0.648
\end{aligned}
$$

$$
\begin{aligned}
F_{kl3} = &(0.990 \times 0.387) + \\
&(0.3480 \times 0.344) + \\
&(0.1781 \times 0.2551) \approx 0.548
\end{aligned}
$$

Finally, the overall factor index for a particular district was obtained by summing up the index value from each factor. For instance, the overall factor index for Kuala Lumpur was computed as below:

$$F_{kl} = F_{kl1} + F_{kl2} + F_{kl3}$$
$$= 0.918 + 0.648 + 0.548 = 2.114$$

The complete index is listed in Table 10 from the highest SES index to the lowest index. The larger the index value, the higher the SES index for the area. The top five districts with a high SES index were districts located in the Federal Territory of Kuala Lumpur, Pulau Pinang and Selangor. The highest SES index was located in a metropolitan area, Kuala Lumpur, which also the capital of Malaysia. Besides that, the high SES areas were also situated in the administration areas, which were also the capital cities of the states i.e. Georgetown in Timur Laut (Pulau Pinang), Shah Alam in Petaling (Selangor), Bandaraya Melaka in Melaka Tengah (Melaka), Seremban (Negeri Sembilan), Ipoh in

Kinta (Perak), Alor Setar in Kota Setar (Kedah) and Johor Bahru (Johor). The main economic drivers in these areas are manufacturing and services. These activities contribute to a wide scope of better job opportunities both in the public and private sectors. The overall growth in employment indirectly results in higher purchasing power to own material facilities and also basic utilities. Besides that, the high SES index in these areas was also due to good development of infrastructure and facilities such as public transport and highways (transportation), schools, colleges and universities (education), hospitals (health) and many more.

Meanwhile, the bottom five districts were situated in Kelantan and Pahang. This was followed by a few districts in Terengganu and Kedah. Generally, the low SES areas were far from developed areas or in other words, they are situated in rural areas. They were mostly located in the agricultural, fisheries, hilly and protected areas. In most cases, agriculture and fisheries were the main socio-economic resources for the people in the low SES areas.

It is to be noted that there are a limited number of studies related to SES index construction in Malaysia; nevertheless, the findings of this study are comparable to those of Fam, Ismail and Jemain (2017). However, the difference between both studies was in variable selection as well as the method used in constructing the index. Fam et al. (2017) constructed the General Index of Deprivation (GID), which focussed on deprivation criteria and detecting disadvantages. However, our study focussed on the socioeconomic development index. Based on their result, the majority of deprived areas were located in Kelantan, Terengganu, Kedah, Pahang and Perlis, while the majority of the affluent areas were located in the west coast of Peninsular Malaysia, comprising metropolitan and urban areas. The affluent areas in Peninsular Malaysia were found to be Kuala Lumpur, Petaling Jaya, Johor Bahru, Melaka Tengah and all districts in Pulau Pinang. The

comparison analysis between these two studies implied that there was no significant difference between the results obtained from our study and those obtained by Fam et al. (2017). The high GID index indicated a low SES index, while the low GID index indicated a high SES index. However, there was a slight difference in the ranking of our index with the GID index, which may have been due to the difference between the variables and the method used in constructing the index.

Table 10
The SES index value for the districts in Peninsular Malaysia

District	SES Index value	District	SES Index value
Kuala Lumpur	2.1145	Kerian	1.2767
Timur Laut	2.0139	Kota Bharu	1.2757
Petaling	1.9721	Jelebu	1.2575
Gombak	1.7699	Bentong	1.2544
Ulu Langat	1.7387	Hulu Selangor	1.2502
Kinta	1.7040	Temerloh	1.2239
Melaka Tengah	1.6633	Dungun	1.2188
Seremban	1.6535	Batang Padang	1.2178
Kota Setar	1.6467	Kota Tinggi	1.2129
Barat Daya	1.5912	Kemaman	1.2122
Johor Bahru	1.5658	Kuala Selangor	1.2032
Klang	1.5629	Langkawi	1.1908
Seberang Perai Tengah	1.5439	Raub	1.1785
Kuala Muda	1.5155	Maran	1.1503
Kuala Pilah	1.5145	Mersing	1.1341
Seberang Perai Utara	1.4840	Yan	1.1302
Rembau	1.4747	Baling	1.0945
Alor Gajah	1.4694	Marang	1.0838
Kuantan	1.4624	Jempol	1.0465
Batu Pahat	1.4500	Pendang	1.0171
Muar	1.4176	Jerantut	1.0058
Seberang Perai Selatan	1.4137	Machang	0.9714
Jasin	1.4085	Cameron Highlands	0.9443
Manjung	1.4035	Besut	0.9300
Kuala Kangsar	1.3987	Hulu Terengganu	0.9040
Hilir Perak	1.3975	Tumpat	0.8921
Kulim	1.3902	Ulu Perak	0.8832
Segamat	1.3820	Pasir Mas	0.8479
Port Dickson	1.3816	Pekan	0.8314
Tampin	1.3811	Bera	0.8285
Larut Matang	1.3789	Tanah Merah	0.8167

Table 10 *(continue)*

District	SES Index value	District	SES Index value
Pontian	1.3757	Padang Terap	0.8150
Perak Tengah	1.3732	Pasir Puteh	0.7851
Kluang	1.3726	Sik	0.7826
Kuala Terengganu	1.3523	Lipis	0.7715
Bandar Baharu	1.3406	Setiu	0.7508
Sepang	1.3263	Bachok	0.7238
Kangar	1.3179	Rompin	0.6658
Sabak Bernam	1.2849	Jeli	0.6525
Kubang Pasu	1.2841	Kuala Krai	0.6067
Kuala Langat	1.2784	Gua Musang	0.0965

CONCLUSION

Most of the districts with a high SES were located in states with a high percentage of urban population such as the Federal Territory of Kuala Lumpur, Pulau Pinang, Selangor and Melaka. However, there were also a few districts with a high SES index that were also the capital cities of states. The districts located in the undeveloped states were mostly classified as areas with a low SES index.

Overall, this study provides an idea of how to construct an SES index for areal data using appropriate statistical methods. The results obtained in this study are beneficial and can be used by the authorities to draft proactive action, especially in the development of low SES areas in order to reduce the gap in development between districts in Peninsular Malaysia and to plan further national progress. As different districts have different SES indices, the specific information yielded by this study can advise on the amount of resources to be allocated for different areas for homogenous development between the districts. In addition, the results of the index construction can be used as input data or explanatory variables for further study involving spatial regression analysis in a large variety of contexts like public health studies, social epidemiology, environment assessment and urban and social planning.

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REFERENCES

Bland, J., M., & Altman, D., G. (1997). Statistics notes: Cronbach's alpha. *British Medical Journal*, *314*(86), 572–575.

Carstairs, V. (1995). Deprivation indices: Their interpretation and use in relation to health. *Journal Epidemiology Community Health*, *49*(Suppl. 2), S3–S8.

Carstairs, V., & Morris, R. (1989). Deprivation: Explaining differences in mortality between Scotland and England and Wales. *BMJ*, *299,* 886–889.

Castles, I. (1994). 1991 census socio-economic indexes for areas. *Information paper.* Canberra: Australian Bureau of Statistics.

Cortinovis, I., Vella, V., & Ndiku, J. (1993). Construction of a socio-economic index to facilitate analysis of health data in developing countries. *Social Science & Medicine*, *36*(8), 1087–1097.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297–334.

DeCoster, J. (1998). Overview of factor analysis. Retrieved March 1, 2016, from http://www.stat-help.com/notes.html.

Earnest, A., Ong, M. E. H., Shahidah, N., Chan, A., Wah, W., & Thumboo, J. (2015). Derivation of indices of socioeconomic status for health services research in Asia. *Preventive Medicine Reports*, *2*, 326–332.

Fam, S. F., Ismail, N., & Jemain, A. A. (2017). Geographical and socio-economic analysis in Peninsular Malaysia. *The Social Sciences, 12*(9), 1695–1704.

Filmer, D., & Pritchett, L. H. (2001). Estimating wealth effect without expenditure data – Or tears: An application to educational enrolments in states of India. *Demography, 38*(1), 115–132.

Fukuda, Y., Nakamura, K., & Takano, T. (2007). Higher mortality in areas of lower socioeconomic position measured by a single index of deprivation in Japan. *Public Health*, *121*(3), 163–73.

Gwatkin, D. R., Rutstein, S., Johnson, K., Suliman, E., Wagstaff, A., & Amouzou, A. (2007). Socio-economic differences in health, nutrition, and population within developing countries. *Washington, DC: World Bank*, 287.

Holt, J., & Lo, C. (2008). The geography of mortality in the Atlanta metropolitan area. *Computers, Environment and Urban Systems*, *32*(2), 149–164.

Howe, L. D., Hargreaves, J. R., & Huttly, S., R. (2008). Issues in the construction of wealth indices for the measurement of socio-economic position in low-income countries. *Emerging Themes in Epidemiology*, *5*(1), 3–16.

Jarman, B. (1983). Identification of underprivileged areas. *British Medical Journal*, *286*, 1705–1708.

Krishnan, V. (2010). Constructing an area-based socioeconomic status index: A principal component analysis approach. *Early Childhood Council Annual Conference 2010,* 2010, May 7, Christchurch, New Zealand.

Lalloué, B., Monnez, J., Padilla, C., Kihal, W., Le Meur, N., Zmirou-Navier, D., & Deguen, S. (2013). A statistical procedure to create a neighborhood socioeconomic index for health inequalities analysis. *International Journal for Equity in Health*, *12*(1), 21.

Marí-Dell'Olmo, M., Martínez-Beneito, M. A., Borrell, C., Zurriaga, O., Nolasco, A., & Domínguez-Berjón, M. F. (2011). Bayesian factor analysis to calculate a deprivation index and its uncertainty. *Epidemiology*, *22*(3), 356–364.

Matheson, F. I., Dunn, J. R., Smith, K. L. W., Moineddin, R., & Glazier, R. H. (2014). Development of the Canadian marginalization index: A new tool for the study of inequality. *Canadian Journal of Public Health, 103*, 12–16.

Nelder, R., & Maconachie, M. (1997). *Deprivation scores at neighbourhood level within Plymouth City*. Dartington, Devon, England: South & West Devon Health Authority .

Pampalon, R., Hamel, D., & Gamache, P. (2009). A comparison of individual and area- based socioeconomic data for monitoring social inequalities in health. *Health Reports*, *20*(3), 85–94.

Pornet, C., Delpierre, C., Dejardin, O., Grosclaude, P., Launay, L., Guittet, L., … Launoy, G.

(2012). Construction of an adaptable European transnational ecological deprivation index: The French version. *Journal of Epidemiol Community Health*, *66*(11), 982–989.

Rahman, N. A., & Zakaria, S. (2012). The household-based socio-economic index for every district in Peninsular Malaysia. *International Journal of Mathematical, Computational, Natural and Physical Engineering*, *6*(10), 184–191.

Sahn, D., & Stifel, D. (2003). Exploring alternative measures of welfare in the absence of expenditure data. *Rev Income Wealth*, *49*(4), 463–489.

Salmond, C., Crampton, P., King, P., & Waldegrave, C. (2006). NZiDep: A New Zealand index of socioeconomic deprivation for individuals. *Social Science & Medicine*, *62*(6), 1474–1485.

Salmond, C., Crampton, P., & Sutton, F. (1998). NZDep91: A New Zealand index of deprivation. *Australian and New Zealand Journal of Public Health*, *22*(7), 835–837.

Sanusi, Y. (2008). Application of human development index to measurement of deprivations among urban households in Minna, Nigeria. *Habitat International*, *32,* 384–398.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2,* 53–55.

Townsend, P., Simpson, D., & Tibbs, N. (1985). Inequalities in health in the city of Bristol: A preliminary review of statistical evidence. *International Journal of Health Service*, *15,* 637–63.

Vyas, S., & Kumaranayake, L. (2006). Constructing socio-economic status indices: How to use principal components analysis. *Health Policy and Planning*, *21*(6), 459–468.

Zakaria, S. (2014). *Analisis reruang bagi kes -kes jenayah di Semenanjung Malaysia* [Spatial analysis of crime cases in Peninsular Malaysia] (Doctoral thesis), Universiti Sains Malaysia, Malaysia.

APPENDIX

Supplementary Table 1
Correlation matrix

	Car	Motorcycle	Air-conditioner	Washing machine	Telephone	Television	Video	Water	Electric	Toilet	Tertiary Education	School Attendance	Single mother	Married	Mortality	Professional	Basic work	Crime	Urbanization
Car	1.000	-0.573	0.854	0.771	0.762	0.562	0.906	0.549	0.327	0.901	0.699	-0.832	-0.595	0.595	-0.408	0.601	0.173	0.643	0.647
Motorcycle	-0.573	1.000	-0.447	-0.165	-0.211	0.100	-0.457	-0.009	-0.002	-0.555	-0.627	0.373	0.357	-0.097	0.373	-0.637	0.165	-0.591	-0.358
Air-conditioner	0.854	-0.447	1.000	0.644	0.669	0.500	0.798	0.519	0.323	0.775	0.728	-0.740	-0.537	0.606	-0.331	0.623	0.203	0.735	0.641
Washing machine	0.771	-0.165	0.644	1.000	0.806	0.753	0.743	0.734	0.373	0.669	0.451	-0.820	-0.396	0.521	-0.232	0.358	0.277	0.443	0.551
Telephone	0.762	-0.211	0.669	0.806	1.000	0.789	0.836	0.746	0.377	0.772	0.420	-0.783	-0.290	0.730	-0.062	0.333	0.324	0.465	0.568
Television	0.562	0.100	0.500	0.753	0.789	1.000	0.583	0.624	0.686	0.499	0.275	-0.627	0.001	0.479	0.093	0.246	0.335	0.281	0.368
Video	0.906	-0.457	0.798	0.743	0.836	0.583	1.000	0.669	0.209	0.940	0.549	-0.858	-0.624	0.736	-0.323	0.398	0.292	0.596	0.673
Water	0.549	-0.009	0.519	0.734	0.746	0.624	0.669	1.000	0.207	0.627	0.314	-0.697	-0.366	0.653	-0.119	0.098	0.303	0.367	0.578
Electric	0.327	-0.002	0.323	0.373	0.377	0.686	0.209	0.207	1.000	0.182	0.304	-0.297	0.246	0.088	0.165	0.380	0.224	0.287	0.276
Toilet	0.901	-0.555	0.775	0.669	0.772	0.499	0.940	0.627	0.182	1.000	0.566	-0.816	-0.613	0.679	-0.362	0.452	0.184	0.610	0.650
Tertiary Education	0.699	-0.627	0.728	0.451	0.420	0.275	0.549	0.314	0.304	0.566	1.000	-0.604	-0.405	0.249	-0.376	0.854	0.025	0.702	0.496
School Attendance	-0.832	0.373	-0.740	-0.820	-0.783	-0.627	-0.858	-0.697	-0.297	-0.816	-0.604	1.000	0.505	-0.542	0.349	-0.474	-0.246	-0.553	-0.634
Single mother	-0.595	0.357	-0.537	-0.396	-0.290	0.001	-0.624	-0.366	0.246	-0.613	-0.405	0.505	1.000	-0.530	0.647	-0.183	-0.035	-0.317	-0.367
Married	0.595	-0.097	0.606	0.521	0.730	0.479	0.736	0.653	0.088	0.679	0.249	-0.542	-0.530	1.000	-0.043	0.031	0.455	0.342	0.407
Mortality	-0.408	0.373	-0.331	-0.232	-0.062	0.093	-0.323	-0.119	0.165	-0.362	-0.376	0.349	0.647	-0.043	1.000	-0.294	0.307	-0.253	-0.327
Professional	0.601	-0.637	0.623	0.358	0.333	0.246	0.398	0.098	0.380	0.452	0.854	-0.474	-0.183	0.031	-0.294	1.000	-0.184	0.648	0.400
Basic work	0.173	0.165	0.203	0.277	0.324	0.335	0.292	0.303	0.224	0.184	0.025	-0.246	-0.035	0.455	0.307	-0.184	1.000	0.153	0.193
Crime	0.643	-0.591	0.735	0.443	0.465	0.281	0.596	0.367	0.287	0.610	0.702	-0.553	-0.317	0.342	-0.253	0.648	0.153	1.000	0.620
Urbanization	0.647	-0.358	0.641	0.551	0.568	0.368	0.673	0.578	0.276	0.650	0.496	-0.634	-0.367	0.407	-0.327	0.400	0.193	0.620	1.000

SOCIAL SCIENCES & HUMANITIES

PERTANIKA JOURNALS

Linguistic Realisations of Rhetorical Structure in Research Articles Abstracts: An Analysis Based on Food Technology Journals

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ABSTRACT

According to the ANSI (American National Standards Institute) guidelines, abstracts of research articles should be written in an objective mode. The abstracts should provide the main points of a study as briefly, concisely and objectively as possible. However, several studies found there to be disciplinary variations in rhetorical structure and in linguistic features. Hyland (2005b) also found that RA abstracts were likely an interaction between authors and their readers. Therefore, novice authors should see to it that their abstracts are crafted with the awareness of rhetorical moves, some linguistic features and the element of interactional metadiscourse to create an effective RA abstract. The present study aims to explore the rhetorical structure and the linguistic features in 100 RA abstracts in the field of food technology. Hyland's five-move model is chosen as an analytical framework to detect rhetorical structure. Hyland (2005b)'s classification of stance and Hyland (2005a)'s taxonomy of interactive metadiscourse markers are employed as the approach in the analysis of linguistic features. The study focused on the choice of tenses, evaluative *that-* structure, stances and transition markers appearing in each move: Introduction, Method, Purpose, Results and Conclusion. The findings suggest that particular linguistic features appear in certain rhetorical moves. The findings could be used for their pedagogical implications for novice authors in the field of food technology, especially in the EFL context.

Keywords: Disciplinary variations, food technology, genre analysis, linguistic features, research article abstracts, rhetorical structure

INTRODUCTION

Research article (RA) abstracts are the first point of contact with research information for readers seeking research in their field. RA abstracts should be able to help readers

decide if they should read the rest of the article. For these reasons, skillfully written RA abstracts are important for novice authors who wish to enter the discourse community of their discipline, and should be crafted to facilitate such requirements. Swales (1990) proposed and developed the concept of a move, a structural segment that had a specific communicative function and purpose, for analyzing textual structure. To help novice authors to acquire the skill of writing effective RA abstracts, some researchers have explored the rhetorical structure and linguistic features.

Salager-Meyer (1992) found a close relationship between the rhetorical function of each abstract move and the use of verb tenses and modality, while Santos (1996) found that different moves served different genre purposes and thus, required different linguistic resources to realize those purposes, such as thematisation, tense choice and voice choice. Later, Pho (2008) suggested that certain linguistic features such as grammatical subject, verb tense and voice could help distinguish moves in abstracts. Previous studies have pointed to a relationship between the rhetorical moves and linguistic features.

It is widely believed that scientific writing is purely objective, impersonal and informational. This kind of writing is designed to disguise the author and deal directly with facts and independent truth. However, previous research has revealed that RA abstracts are not written in the objective mode. Hyland (2003) explored the use of self-reference and self-citation. Later,

Hyland and Tse (2005) studied the authorial stance and the 'evaluative *that-* structure' in RA abstracts.

Hyland (2005b) also mentioned that effective academic writing was likely interactive between authors and their readers. Authors express their arguments in ways that are acceptable, meaningful and plausible to colleagues. Hyland pointed out that the use of hedges was undertaken to present claims with humility and caution. Gillaerts and Van de Velde (2010) found the use of hedges, boosters and attitude markers in abstracts in *Journal of Pragmatics*, while Khedri, Heng and Ebrahimi (2013) explored interactive metadiscourse markers in abstracts in the disciplines of applied linguistics and economics. They found the frequent use of these interactive metadiscourse markers (IMMs): transition markers, code glosses, endophoric markers and frame markers, respectively. Liu and Huang (2017) explored the use of Chinese authors' interactional metadiscourse in economics research article abstracts. They found that Chinese authors used hedges and boosters to a high degree. Self-mention also increased substantially from 2004 to 2013.

To write effective RA abstracts, novice authors should see to it that their abstracts are crafted with the awareness of rhetorical moves, some linguistic features and the element of interactional metadiscourse. Previous studies have explored RA abstracts from various disciplines and they have found there to be disciplinary variation, but no study has explored RA abstracts from the field of food technology. Thailand aims to

be the leading food producer in Southeast Asia. To respond to the government policy, many universities provide programmes for undergraduate and postgraduate study in food technology. The findings may have some pedagogical implications for novice authors in this field.

The present study aimed to explore the rhetorical structure and some important linguistic features such as verb tense and interactional metadiscourse. The exploration was expected to answer the following questions.

1. What are the features of the move structure of abstracts in terms of move frequency and move pattern?

2. What are the linguistic features of each move in the RA abstracts in the field of food technology?

METHODS

The Construction of the Corpus

According to Nwogu (1991), three criteria should be employed in the selection of the data: representativity, reputation and accessibility. The impact factors of the journals in the Journal Citation Reports (JCR) presented by the ISI Web of Knowledge 2014 was the basis of representativity and reputation. A corpus of 100 research articles was compiled from three journals in the field of food technology published in the year 2014 via the e-Databases of Mahidol University Library and Knowledge Center. Of the journals selected, 35 articles were chosen from *Food Hydrocolloid (FH)*, 35 from *International Journal of Food Microbiology (IJFM)* and 30 from *Food Chemistry (FC)*, making a total of 100 research articles. These were all empirical research articles with the conventional section format of Introduction-Method-Result-Discussion (IMRD). Conceptual/ Theoretical studies were excluded.

Approach to the Analysis of Rhetorical Structure

Maswana and Kanamaru (2015) stated that the genre-based approach is often employed to understand research articles by identifying their organisational structure

Table 1
Description of RA abstracts corpus

	Food Hydrocolloid	International Journal of Food Microbiology	Food Chemistry
No. of RA abstracts	35	35	30
Length of RA abstracts (Range)	117-251	112-345	97-212
Total number of words of RA abstracts	6,577	7,845	4,457

Discipline: Food Technology
Number of RA abstracts: 100 RA abstracts
Year of publication: All articles were published in 2014
Journals: The three journals in the discipline of food technology have high impact factors according to the ISI Web of Knowledge 2014

and key linguistic features. Therefore, the present study applied the existing move models as the analytical framework.

There are three existing models for abstract writing: Bhatia (1993)'s four-move model, Santos (1996)'s five-move model and Hyland (2000)'s five-move model. In deciding which model was most appropriate to employ in the present study, all three models were tested with a typical abstract. It was found that Bhatia's model does not cover the background of the research and it was, therefore, ruled out. Both the Santos model and the Hyland model were considered viable and acceptable for analyzing research article abstracts in the present study. However, Hyland's five-move model was chosen because Santos' model is derived from 94 abstracts in the field of applied linguistics, while Hyland studied 800 abstracts across eight disciplines: philosophy, sociology, applied linguistics, marketing, electrical engineering, mechanical engineering, physics and biology. Hyland's model was therefore deemed to be more appropriate. This model is illustrated in Table 2.

Table 2
Classification of rhetorical moves in article abstracts (Hyland, 2000, p. 67)

Moves	Functions
Introduction	Establishes context of the paper and motives of the research or discussion
Purpose	Indicates purpose, thesis or hypothesis, outlines the intention behind the paper
Method	Provides information on design, procedures, assumption, approach, data, etc.
Product	States main findings or results, the argument, or what was accomplished
Conclusion	Interprets or extends results beyond scope of paper, draws inferences, points to applications or wider implications

The unit of coding for research article abstracts is a sentence. Each sentence is given a move label. Sometimes, the condensed nature of abstracts causes the possibility of one sentence containing two (dual) moves. Thus, if dual moves occur in one sentence, the sentence would be labelled as containing two or more moves. To determine whether a move is optional or conventional, the frequency of a particular move is recorded. According to Kanoksilapatham (2005), conventional moves occurred from 60% and higher. If the frequency of a move falls below 60%, the move is considered an optional move.

Like Crookes (1986); Kanoksilapatham (2003) pointed out that lacking explicit rules for decisions on move boundaries reflected the subjectivity of the judgement. To avoid such subjectivity, inter-rater checking was conducted. Following these two studies, one quarter or 25% of the research article abstracts were given to a coder to conduct the individual move identification. The coder was a native English speaking university lecturer. Then the two sets of coding done by

the researcher and the coder were compared. Percentage agreement is a common way to determine the index of inter-coder reliability (Kanoksilpatham, 2003) as it is simple to interpret and to understand. There is also the possibility that discrepancy may occur. It is necessary to resolve any discrepancies through further discussion and analysis, and then re-code problematic texts. If the two coders could not reach an agreement in the re-code problematic text stage, a third coder will be invited to solve the problematic text. The third coder in this case was also a native English speaking university lecturer.

Approach to the Analysis of Linguistic Features

Previous researchers found some particular linguistic features were prominent in particular moves in abstracts. The present study focusses on the following linguistic features.

The Choice of Tenses. Salager-Meyer (1992) stated that the different tenses were related to communicative function of the different rhetorical divisions of abstracts. The 'history' type of discourse (purpose, method and results) is related to the past tense. The present is preferred in the 'comment' type of discourse: conclusion, recommendation and statement of the problem. The present perfect is used to show authors' disagreement and a gap in knowledge. These findings illustrate that it is misleading to teach verb tense choice according to time lines only because the time-sense relationship governs tense selection in writing abstracts. Referring to the findings, the present study explored the choice of tenses in each abstract move. The analysis procedures were as follows. First, if a move was represented by a sentence, the verb tense of that sentence was the verb tense of the move. Second, if a move was represented by several sentences that had both present tense and past tense, both tenses were included. Third, if a move was composed of several sentences that had a single tense, the verb tense of those sentences was the verb tense of the move.

Evaluative *that*- Structure. According to Hyland and Tse (2005), 'evaluative *that*-structure' was a grammatical pattern in which a '*that*' complement clause was contained in a higher super-ordinate clause to complete its construction. This structure allows authors to operate powerfully to highlight and promote the importance of the study. The authors pick the choice of reporting verbs to indicate the strength of claim from strong (e.g. prove) to weak (e.g. suggest). Hyland and Tse found that this structure was widely employed in RA abstracts from six disciplines and referred to the structure as 'evaluative that':

> matrix clause [evaluation] + that-clause [evaluated entity]

The present study explored the use of 'evaluative *that*- structure' in each move to find out how the authors used the structure.

The analysis procedures were as follows. First, if a move in an abstract contained one evaluative *that-* structure, it would be counted as one author using the structure. Second, if a move in an abstract contained several instances of the use of the evaluative *that-* structure, it would also be counted as one author using the structure. The number of authors using the structure in each move was the focus, not the number of uses of the evaluative *that-* structure. The choice of reporting verbs is discussed below.

Stances and Transition Markers. According to Hyland (2005b), stance can be seen as "an attitudinal dimension and includes features which refer to the ways authors present themselves and convey their judgements, opinions, and commitments. It is the way that authors intrude to stamp their personal authority onto their arguments or step back and disguise their involvement" (p. 176). The present study retained Hyland's (2005b) classification of stance. He distinguished four different types of stance: attitude markers, boosters, hedges and self-mentions. First, "attitude markers indicate the authors' affective, rather than epistemic, attitude to propositions, conveying surprise, agreement, importance, frustration, and so on, rather than commitment" (p. 180). Second, boosters "allow authors to express their certainty in what they say and to make involvement with the topic and solidarity with their audience" (p. 179). In other words, boosters are used to strengthen a claim, or to close off alternative voices. Third, hedges "indicate the author's decision to withhold complete commitment to a proposition, allowing to be presented as an opinion rather than accredited fact" (p. 179). Finally, "self-mention refers to the use of first-person pronouns and possessive adjectives to present propositional, affective and interpersonal information" (p. 181). Self-mentions are places where authors put themselves explicitly on stage. The classification of stance is shown in Figure 1.

Apart from stance, interactive metadiscourse markers were deployed when authors of the sample abstracts wrote the RA abstracts. Based on Hyland (2005a)'s taxonomy of interactive metadiscourse markers, there were five IMMs: transition
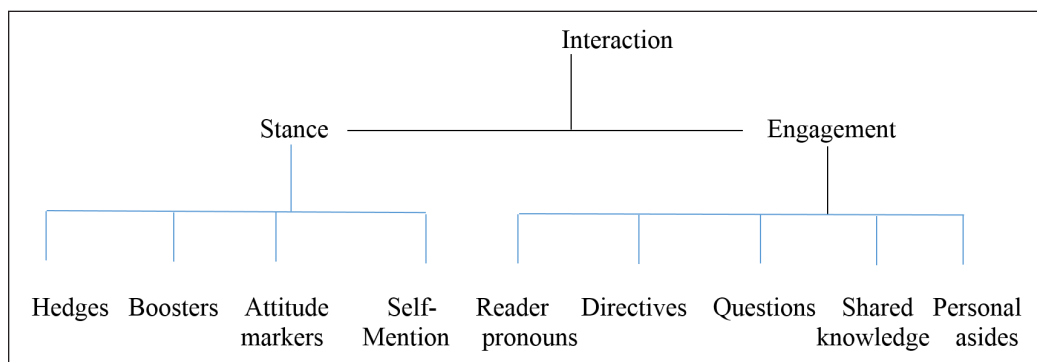
Figure 1. Key resources of academic interaction (Hyland, 2005b, p. 177)

markers, endophoric markers, frame markers, evidentials and code glosses. Khedri, Heng and Ebrahimi (2013) found that transition markers acted as the leading category in the RA abstracts in the disciplines of applied linguistics and economics. Transition markers aid readers in making pragmatic connections between stages in discourse development. Transition markers function to project additive, consequential or contrastive connections between ideas such as *and, furthermore, equally, in the same way, thus, therefore, however* and *in contrast.*

For exploring the elements of stance and transition markers, all the abstracts were scrutinised in full word by word. In this way, all of the elements of stance and transition markers that appeared in each move were collected.

Limitation of the Study

The present study focussed on exploring the four elements of stance in each move in RA abstracts. Engagement and features of reader positioning were not explored because of the shortened form of RA abstracts. Gillaerts and Van de Velde (2010) have indeed stated

that engagement markers were virtually absent in RA abstracts.

To explore the use of interactive metadiscourse markers in the abstracts corpus, a pilot study was done that found that transition markers occurred more frequently than other categories of IMMs. Thus, the present study chose to report only the use of transition markers.

RESULTS

Move Patterns in Food Technology

The most frequent preference patterns among the authors in the field of Food Technology were M-Pr-C (28%), I-M-Pr-C (18%), I-P-M-Pr-C (13%), P-M-Pr-C (12%), M-Pr (9%), I-Pr-C (5%), I-P-Pr-C (4%) and others (11%). These findings were quite different from those reported by Santos (1996) and Pho (2008), who previously found that the P-M-Pr pattern was most prominent in their corpora.

Move Frequency

The frequency of occurrences of each specific move in the field of Food Technology is illustrated in Table 3.

Table 3
Occurrence of moves in the discipline of food technology

Journals / Moves	Food Hydrocolloid (N=35)	International Journal of Food Microbiology (N=35)	Food Chemistry (N=30)	Total Move Occurrences (N=100)
Introduction	11	26	9	46%
Purpose	10	16	9	35%
Method	31	29	29	89%
Product	34	34	30	98%
Conclusion	29	30	25	84%

The analysis of the frequency of moves was used to determine whether the moves were conventional or optional. Most of the abstracts in the corpus had three to four moves. Based on the frequency of occurrences, Method (89%), Product (98%) and Conclusion (84%) were found to be conventional moves.

Linguistic Features of Abstract Moves

Three main linguistic features, choice of tenses, evaluative *that*- structure and stances and transition markers are illustrated in each move section below, respectively.

Introduction Move

Choice of Tenses. In the present corpus, the occurrence of the Introduction Move was 46%. The use of choice of tenses is shown in Table 4.

A manual exploration of the choice of tenses showed that the present tense was used most frequently to establish research background. Examples of the use of choice of tenses are shown below.

Example 1
Streptococcus thermophilus ***is*** a lactic acid bacterium . . .   (IJFM 1)

Example 2
A commercial dietary fiber ***was*** mechanically modified by treating
                                (FH 3)

Example 3
Fusarium verticillioides ***is*** the most prevalent fungus in kernels and a significant risk of fumonisin contamination ***has been exposed***.
                                (IJFM 6)

Table 4
Use of choice of tenses in Introduction Move

Present Tense	Past Tense	Present Perfect	Combination of Tenses
29* (63%)	6 (13%)	2 (4%)	Present + Present Perfect=8 (17%)
			Present + Past = 1 (2%)

*Number of authors who used tenses

Evaluative *that*- Structure. One author used the evaluative *that*- structure in the Introduction Move.

Table 5
Use of 'evaluative that- structure' in Introduction Move

Moves	Evaluative *that*- Structure
Introduction Moves	1*

* Number of authors who used the 'evaluative that- structure'

The findings suggested that the structure was not frequently used by the authors in this discipline.

Example 4
Sensory evaluation of Aspartame in the presence of sodium carboxymethyl cellulose (CMC-L) and sodium alginate (SA) ***revealed that*** only CMC-L showed
                                (FC29)

Stances and Transition Markers. As mentioned above, some of the authors intruded on the text to stamp their personal authority on the reporting or stepped back and disguised their involvement via the use of stances. The use of transition markers is a pragmatic strategy to aid readers in making connections between stages in discourse development.

Table 6
Use of each type of stances and transition markers in Introduction Move

Attitude Markers	Boosters	Hedges	Self-Mention	Transition Markers
19* (41%)	7 (15%)	8 (17%)	- (-%)	6 (13%)

* Number of authors who used stances and transition markers

The findings showed that the attitude markers were the most frequently used in the Introduction Move. The examples of the use of each stance and transition marker are shown below.

Example 5 (Attitude Markers)

Copper (Cu) is an *essential* element and the effects of . . .   (FC 22)

Example 6 (Boosters)

Adding high amounts of sugar influences the physical properties of hydrocolloid systems *enormously*, . . .   (FH 11)

Example 7 (Hedges)

Fine tuning the concentrations of the biopolymers in the mixture *may* result in dairy matrices . . .   (FH 16)

Example 8 (Transition Markers)

However, very little is known about the role of fermented foods . . .   (IJFM 10)

Purpose Move

Choice of Tenses. In the present corpus, the occurrence of the Purpose Move was 35%. The use of choice of tenses is shown in Table 7.

Table 7
Use of choice of tenses in Purpose Move

Present Tense	Past Tense	Present Perfect	Combination of Tenses
8* (22%)	26 (74%)	1 (3%)	-

* Number of authors who used tenses

The Purpose Move was the shortest move. Thus, the use of tenses was simple, and the combination of tenses was not found among the abstracts in this study. The most frequent tense used was the past tense.

Example 9

This paper *studies* the impact of the strawberry . . .   (FC 1)

Example 10

This work ***aimed at*** producing cinnamaldehyde . . . (FH 2)

Example 11

The aim of this work ***has been to study*** the effectiveness . . . (FH 10)

Evaluative *that*- Structure. None of the authors used the evaluative *that*- structure in the Purpose Move (Table 8).

Stances and Transition Markers. Very few authors used stances and transition markers in the Purpose Move (Table 9).

Example 12

In this study, ***we*** assess the impact of carbon dioxide . . . (FC 21)

Example 13

Here, we combine this type of...(IJFM 23)

Method Move

Choice of Tenses. In the present corpus, the occurrence of the Method Move was 89%. The use of choice of tenses is shown in Table 10.

The past tense was the most frequently used tense in the Method Move. None of the authors in the sample had used the present tense to describe the method of their study.

Example 14

Two hundred and thirty-seven samples ***were analyzed*** . . . (IJFM 23)

Example 15

The tensile strength and elastic modulus of the films ***have been improved*** by the addition of CW, while elongation ***tended to be impaired*** by CW loading. (FH 20)

Table 8
Use of 'Evaluative that- Structure' in Purpose Move

Moves	Evaluative *that*- Structure
Purpose Move	-

Table 9
Use of each type of stances and transition markers in the Purpose Move

Attitude Markers	Boosters	Hedges	Self-Mention	Transition Markers
-	-	-	5* (14%)	1 (3%)

* Number of authors who used stances and transition markers

Table 10
Use of choice of tenses in Method Move

Present Tense	Past Tense	Present Perfect	Combination of Tenses	Others
- (-%)	85* (96%)	1 (1%)	Present Perfect + Past Tense = 1 (1%) Present Tense + Past Tense = 1 (1%)	By + V. ing = 1 (1%)

* Number of authors who used tenses

Example 16

By using an artificial taste receptor model, . . .   (FC 29)

Evaluative *that*- Structure

None of authors used the 'evaluative *that*-structure' in the Method Move (Table 11).

Stances and Transition Markers. Few authors used stances and transition markers in the Method Move (Table 12).

Example 12 (Hedges)

. . . thermal stability *can be adapted* by the controlled addition of sugar. (FH 11)

Example 13 (Self-Mention)

. . . *we* constructed and characterized deletion mutants . . .   (IJFM 1)

Example 14 (Transition Markers)

Additionally, the composition of phenolic . . .   (FC 5)

Product Move

Choice of Tenses. In the present corpus, the occurrence of the Product Move was 98%. The choice of tenses used is shown in Table 13.

To report the findings, authors preferred to use the past tense, a combination of present and past tenses and the present tense, respectively.

Example 15

We *found* that PEGS with different molecular . . .   (FC 2)

Example 16

. . . films *were* not strong. Nevertheless, it *is* interesting to note a high . . . (FH 1)

Example 17

In this study, we *report* that milk triggers . . .   (IJFM 1)

Table 11
Use of the 'Evaluative that- Structure' in the Method Move

Moves	Evaluative *that*- Structure
Method Move	-

Table 12
Use of each type of stances and transition markers in Method Move

Attitude Markers	Boosters	Hedges	Self-Mention	Transition Markers
-	-	1* (%)	5 (6%)	3 (3%)

* Number of authors who used stances and transition markers

Table 13
Choice of tenses in Product Move

Present Tense	Past Tense	Present Perfect	Combination of Tenses
6 (6%)	71 (72%)	-	Present Tense + Past Tense = 21 (21%)

* Number of authors who used tenses

Evaluative *that*- Structure

Ninety-eight authors used the Product Move and 37 of these authors used the 'evaluative *that*- structure' to report their findings (Table 14).

Example 18

DSC experiments ***show that*** more water . . .   (FH 3)

Example 19

Correlation analysis ***revealed that*** the hydroxyl . . .   (FC 9)

Example 20

Results ***indicated that*** E. coli 0157:H7 was able to grow . . .   (IJFM 4)

Stances and Transition Markers

It was found that many authors used stances and transition markers in the Product Move (Table 15).

Example 21 (Attitude Markers)

Therefore, stacking fermentation is an ***essential*** stage . . .   (IJFM 2)

Example 22 (Boosters)

The PH was found to be a key parameter that ***greatly*** influenced the properties . . .   (FH 17)

Example 23 (Hedges)

. . . the pyranose ring ***might*** have hydrogen bonded with water . . . (FC 30)

Example 24 (Self-Mention)

We found no resistance toward the biocides . . .   (IJFM 29)

Example 25 (Transition Markers)

As a result, a radical unique position (C3) in the oleuropein . . .   (FC 20)

Conclusion Move

Choice of Tenses. In the present corpus, the occurrence of the Conclusion Move was 84%. The use of choice of tenses is shown in Table 16.

To conclude and apply their findings, authors preferred to use the present tense, past tense and a combination of present and past tenses, respectively.

Table 14
The use of the 'Evaluative that- Structure' in the Product Move

Moves	Evaluative *that*- Structure
Product Move	37* (38%)

* Number of authors who used the 'evaluative that- structure'

Table 15
The use of each type of stances and transition markers in Product Move

Attitude Markers	Boosters	Hedges	Self-Mention	Transition Markers
8* (8%)	27 (28%)	21 (21%)	10 (10%)	40 (41%)

* Number of authors who used stances and transition markers

Table 16
Use of choice of tenses in Conclusion Move

Present Tense	Past Tense	Future	Combination of Tenses
39 (46%)	26 (31%)	1 (2%)	Present Tense + Past Tense = 16 (19%)
			Past Tense + Future Tense = 2 (2%)

* Number of authors who used tenses

Example 26

The study ***provides*** some insight into the potential microbial . . . (IJFM 27)

Example 27

These findings ***demonstrated*** that CSPI could be a used as . . . (FH 31)

Example 28

These results ***suggest*** that the attach of . . . normal rice starch preferentially ***occurred*** in the amylopectin . . . (FH 14)

Example 29

Particle size, . . . ***showed*** good correlation . . . Several factors, . . . ***will*** also affect the heat . . . (FH 34)

Example 30

The regular consumption of these algae . . . around Azores Islands ***will improve*** human . . . and ***will have*** a protective effect . . . (FC 14)

Evaluative *that*- Structure

Eighty-four authors used the Conclusion Move and 33 of these authors used the 'evaluative *that*- structure' to report the application of findings (Table 17).

Example 31

This research ***suggested that*** the absorption of dietary . . . (FC 22)

Example 32

We therefore ***hypothesize that*** MfsA could be a tress . . . (IJFM 25)

Stances and Transition Markers. Many authors used stances and transition markers in the Conclusion Move (Table 18).

Table 17
The use of the 'evaluative that- structure' in the Conclusion Move

Moves	Evaluative *that*- Structure
Conclusion Move	33* (39%)

* Number of authors who used the 'evaluative that- structure'

Table 18
The use of each type of stances and transition markers in Conclusion move

Attitude Markers	Boosters	Hedges	Self-Mention	Transition Markers
36* (43%)	11 (13%)	42 (50%)	5 (6%)	16 (19%)

* Number of authors who used stances and transition markers

Example 33 (Attitude Markers)

. . . water quality appear most *crucial* to improve . . .   (IJFM 32)

Example 34 (Boosters)

. . . dietary copper could vary *markedly* dependent on the types . . .   (FC 22)

Example 35 (Hedges)

. . . branch fraction are *likely to* contribute to the slow digestion of starch.   (FC 4)

Example 36 (Self- Mention)

Our findings underline that selection of suitable strain . . .   (IJFM 7)

Example 37 (Transition Markers)

Thus, the oil body aggregation behavior . . .   (FC 13)

DISCUSSION AND CONCLUSION

In the present corpus, the prominent move pattern was M-Pr-C. In addition, the analysis of frequency of occurrences of each move illustrated that three moves were conventional: Method Move, Product Move and Conclusion Move, while the Introduction and Purpose Moves were optional moves. However, Suntara and Usaha (2016) found that all five moves in the field of agriculture were conventional. According to Becher and Trowler (2001), Food Technology and Agriculture are under the same domain: a hard-applied domain. The finding suggested that disciplinary variations do exist (Table 19).

It is noticeable from the research that there is a relationship between tenses and the communicative function of the different rhetorical divisions of abstracts. In the Introduction Move, the present tense was prominent. The past was prominent in the Purpose Move, Method Move and Product Move. In the Conclusion Move, the use of the present tense was slightly higher than the use of the past tense. Some authors combine two tenses in one move.

The findings showed that history-type discourse (purpose, method and result) was presented by the past tense. The past tense

Table 19
Summary of choice of tenses used in RA abstracts

Moves	Present Tense	Past Tense	Present Perfect	Future	Combination of Tenses
Introduction	**29***	6	2	-	Present + Present Perfect (8)
					Present + Past (1)
Purpose	8	**26**	1	-	-
Method	-	**85**	1	-	Present Perfect + Past Tense (1)
					Present Tense + Past Tense (1)
Product	6	**71**	-	-	Present Tense + Past Tense (21)
Conclusion	**39**	26	-	1	Present Tense + Past Tense (16)
					Past Tense + Future Tense (2)

* Number of authors who used tenses

was used to report previous research and retell the what, why, how and the results of the new investigation. In addition, comment-type discourse (statement of problem, conclusion and recommendation) is conveyed by the present tense. The present tense was used to signal the comment, established knowledge and generalizations. The present perfect is also used to introduce a topic and to imply the authors' disagreement with previous research findings.

For the voice of the verb, it was found that the use of the passive voice was more prevalent especially in the Method and Product Moves. It was obvious that the authors focused on the person or object that experienced the action rather than the person or object that performed the action. The findings on tenses and voice may be used as pedagogical tools for novice authors in the EFL context.

Table 20 summarizes how the authors used the 'evaluative *that*- structure' in each move.

It is clear that the authors used the structure in the Product and Conclusion Moves, for it was an opportunity to highlight and promote their findings. The structure also helped in attracting the readers to focus on the application of the findings in the Conclusion Move. The choice of strong and weak reporting verbs was varied depending on the authors' intention and the nature of the study. It was also noticeable that no author used the structure in the Purpose and Method Moves. This can be used to demonstrate to novice authors in the EFL context the relationship of moves and the use of the 'evaluative *that*-structure'. Table 21 shows the reporting verbs used in the present corpus.

Table 20
*Summary of use of 'Evaluative **that**- structure' in RA abstracts*

Moves	Evaluative *that*- Structure
Introduction	1*
Purpose	-
Method	-
Product	37
Conclusion	33

* Number of authors who used the 'evaluative that- structure'

Table 21
Collection of reporting verbs in the corpus

strong reporting verbs + that		weak reporting verbs + that	
to confirm	to show	to report	to assume
to establish	to suggest	to observe	to hypothesise
to value	to conclude	to propose	to find
to determine	to document	to imply	to appear
to prove	to demonstrate	to indicate	to reveal

A high frequency of stances and transition markers is also found in the Product and Conclusion Moves as shown in Table 22.

Table 22
Summary of authors who used stances and transition markers in four moves

Moves	Attitude Markers	Boosters	Hedges	Self-Mention	Transition Markers
Introduction	19*	7	8	-	6
Purpose	-	-	-	5	1
Method	-	-	1	5	3
Product	8	27	21	10	40
Conclusion	36	11	42	5	16

*Number of authors who used stances and transition markers

Firstly, the authors in the present corpus used attitude markers most frequently in the Conclusion Move and Introduction Move. This means that the two moves were the space in which the authors could add their affective response towards propositions, argument, agreement and frustration etc. In other words, the authors shared their particular attitudes with the readers in these moves. It could be seen that no author used attitude markers in the Purpose and Method Moves. This makes the tone of Purpose and Method Moves more objective.

Secondly, the authors used boosters in the Product Move and Conclusion Move. They conveyed the certainty in findings they had found here. Similarly, no use of boosters was found in the Purpose and Method Moves. The finding seemed to suggest that there was no interaction between authors and their readers in the Purpose and Method Moves.

Thirdly, the authors used hedges extensively in the Conclusion and Product Moves. Using hedges allows them to avoid making a complete commitment to a proposition. They left room for making other propositions. As with boosters, the authors rarely used hedges in the Purpose and Method Moves, keeping the tone of the two moves objective.

Fourthly, the authors in the present corpus seldom used self-mention. Several used it in the Product, Conclusion, Method and Purpose Moves. It is noticeable that none used it in the Introduction Move. The findings seemed to suggest that the authors preferred to focus on objects or things rather than on themselves.

Finally, transition markers were used more frequently in the Product and Conclusion Moves. The Product Move was filled with the procedures of scientific enquiry, so the authors used transition markers to guide their readers from stage to stage of the process. Table 23 summarizes the function category of transition markers used by the authors.

Table 23
Summary of transition markers in each move

Moves	Function of Transition Markers	Some Examples from the Corpus
Introduction	contrast, addition	however, besides
Purpose	place	here
Method	place, addition, result	here, additionally, therefore
Product	contrast, addition, result, time	nevertheless, furthermore, as a result, meanwhile,
Conclusion	contrast, addition, result, summary	although, furthermore, therefore, in summary

The findings of the present study may be used for their pedagogical implications in academic writing, especially in the EFL context. Some linguistic features of RA abstracts should be incorporated into academic writing courses for graduate and postgraduate students to prepare them to participate in the research world. This knowledge is essential for them in the course of their study and for dialogue in the academic community. Many handbooks on research paper writing give a very general description of an abstract and provide a sample abstract. In order to provide useful instruction on abstract writing to novice authors, it is necessary to illustrate to readers how to realize the structure linguistically. To reach the goal, such information needs to come from corpus-based research findings and it needs to address the disciplinary variations. The corpus in the present study was of empirical research articles, so the results are most clearly applicable to the empirical research genre. Other types of research article such as theoretical papers may have a different structure and linguistic realizations of rhetorical moves. Thus, further studies of theoretical papers from various disciplines may yield interesting results and give us a fuller picture of the rhetoric of research article abstracts.

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REFERENCES

Becher, T., & Trowler, P. R. (2001). *Academic tribes and territories: Intellectual enquiry and* the culture of disciplines. Buckingham; Philadelphia: Society for Research into Higher Education & Open University Press.

Bhatia, V. K. (1993). *Analyzing genre: Language use in professional settings*. London: Longman.

Crookes, G. (1986). Towards a validated analysis of scientific text structure. *Applied Linguistics, 7*(1), 57–70.

Gillaerts, P., & Van de Velde, F. (2010). Interactional metadiscourse in research article abstracts. *Journal of English for Academic Purposes, 9*(2), 128–139.

Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. Harlow: Pearson Education.

Hyland, K. (2003). Self-citation and self-reference: Credibility and promotion in academic publication. *Journal of the American Society for Information Science and Technology*, *54*(3), 251–59.

Hyland, K. (2005a). *Metadiscourse: Exploring writing in interaction*. London: Continuum.

Hyland, K. (2005b). Stance and engagement: A model of interaction in academic discourse. *Discourse Studies, 7*(2), 173–192.

Hyland, K., & Tse, P. (2005). Hooking the reader: A corpus study of evaluative that in abstracts. *English for Specific Purposes 24*(2), 123–139.

Kanoksilapatham, B. (2003). *A corpus-based investigation of biochemistry research articles: Linking move analysis with multidimensional analysis* (Unpublished Ph.D. thesis). Georgetown University, Washington, DC.

Kanoksilapatham, B. (2005). Rhetorical studies of biochemistry research articles. *English for Specific Purposes, 24*, 269–292.

Khedri, M., Heng, C., & Ebrahimi, S. (2013). An exploration of interactive metadiscourse markers in academic research article abstracts in two disciplines. *Discourse Studies, 15*(3), 319–331.

Liu, P., & Huang, X. (2017). A study of interactional metadiscourse in English abstracts of Chinese economics research articles. *Higher Education Studies, 7* (3), 25–41.

Maswana, S., Kanamaru, T., & Tajino, A. (2015). Move analysis of research articles across five engineering fields: What they share and what they do not. *Ampersand*, 2, 1–11.

Nwogu, K. N. (1991). Structure of science popularizations: A genre-analysis approach to the schema of popularized medical texts. *English for Specific Purposes, 10*(2), 111–123.

Pho, P. D. (2008). Research article abstracts in applied linguistics and educational technology: A study of linguistic realizations of rhetorical structure and authorial stance. *Discourse Studies, 10*(2), 231–250.

Salager-Meyer, F. (1992). A text-type and move analysis study of verb tense and modality distribution in medical English abstracts. *English for Specific Purposes, 11*(2), 93–113.

Santos, M. (1996). The text organization of research papers abstracts in applied linguistics. *Text, 16*(4), 481–499.

Suntara, W., & Usaha, S. (2016). Disciplinary variation in research article abstracts in two sciences disciplines. In C. Intaraprasert (Ed), *Proceedings of the First International Conference on Language Development ICLD 2016* (pp. 145–151). Ho Chi Minh City, Vietnam. Thorpe Bowker.

Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. New York: Cambridge University Press.

Thomson Reuters. (2014). *Journal Citation Reports*. [Online]. Retrieved November 25, 2014, from http://adminapps.webofknowledge.com/JCR/JCR?RQ=LIST_SUMMARY_JOURNAL

Contribution of Brackish and Freshwater Aquaculture to Livelihood of Small-Scale Rural Aquaculture Farmers in Kedah, Malaysia

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ABSTRACT

This case study examines the livelihood of small-scale fish farmers in the state of Kedah, Malaysia, with emphasis on their asset possession, livelihood strategies performed and livelihood outcomes achieved. The relationship between these livelihood elements was also analyzed in order to identify the triggering factors contributing to their sustainable livelihood. Data were obtained through systematic socio economic survey of 216 small-scale freshwater and brackish-water pond fish farmers using stratified random sampling. The Structural Equation Modelling method was applied to analyze the relationship between the three elements of the fish farmers' livelihood. The results show that there are significant differences between freshwater and brackish-water systems, particularly in terms of profitability and contribution to the livelihood of farmers due to their involvement level in the activity. Human and financial assets are important components in the livelihood of small-scale fish farmers based on their positive influence on the level of Good Aquaculture Practices, species cultured, total household income and social impact variables. Thus, measures related to the enhancement of farmer's knowledge and their financial status should be emphasized in order to improve the livelihood of small-scale fish farmers in Malaysia.

Keywords: Livelihood, Malaysia, rural aquaculture, small-scale fish farmer

INTRODUCTION

Aquaculture in Malaysia was produced nationwide with three principal objectives namely, to enhance the country's food security; to increase income and export earnings; and to maximise the income of the producers and to alleviate poverty. In the year 2013, the fisheries sub-sector

contributed 14.4% to the agriculture GDP, which ranked the third among the important sub-sectors in agriculture after oil palm (36.5%) and food crops (18.2%) (Department of Statistics, 2013). The total fisheries production in terms of value was RM11.47 billion in 2013, of which aquaculture accounted for 26.5% (DoF, 2013). Aquaculture had registered an annual average growth rate of 10.6% compared to the marine capture fisheries of only 4.7% per year over the 60 years (1950 to 2012). In fact, among the food commodities sector, aquaculture is the fastest growing sub-sector as the sector expanded at an average annual rate of 19.50% over the previous five years (2008-2012) (Department of Statistics, 2012). It also contributed to employment opportunities and income for the population, with 52,260 persons directly involved in aquaculture, as fish farmers accounted for about 28% of the total fisheries workforce in 2012.

Aquaculture farmers in Malaysia are those who are engaged in aquaculture activity either on part-time or full-time basis who had registered with the Department of Fisheries (DoF, 2013). They are classified into three groups based on farm size i.e. small-scale farmers with pond size less than 2 ha, semi-commercial scale farmers with pond size between 2 and 10 ha and commercial scale with farm size more than 10 ha. Aquacultural activity in Malaysia is mostly dominated by small-scale aquaculture (SSA) farmers, who account for about 70% of total aquaculture farmers. In general, SSA is the farming of aquatic organisms

by small-scale households using mainly extensive and semi-intensive husbandry (Edwards & Demaine, 1997), with low input used and low output produced and little or no routine management but employing a large percentage of labour, which is usually provided by household members (FAO, 1996; Siar & Sajise, 2009). Depending on access to resources and seasonality, small-scale aquaculture may be carried out on part-time or full-time basis and integrated with other activities such as crop and livestock farming (Siar & Sajise, 2009), providing a supplement to incomes, a source of extra food and a diversification strategy.

This study was conducted in the state of Kedah, Malaysia. Kedah is situated in the north-western part of Peninsular Malaysia and covers an area of 9427km², with a population of 1.89 mil (Department of Statistics Malaysia, 2013). Kedah is divided into 12 districts, and all of them widely practise aquaculture. Known as the rice bowl of Malaysia, Kedah is also one of the most important places for aquaculture development in the country, especially after 2007. In 2007, development policy in Malaysia was divided into six economic regions namely, the Northern Corridor Economic Region (NCER), the East Coast Economic Region (ECER), Iskandar Malaysia in Southern Johor (IRDA), the Sabah Development Corridor (SDC), the Sarawak Corridor of Renewable Energy (SCORE) and the Labuan International Business and Financial Centre (Labuan IBFC). The idea of development by corridor was conceived with the objective

of maximizing the economic potential of the areas and closing the development and income gap between the different regions in Malaysia (EPU, 2014). Kedah, together with other states in the north of Peninsular Malaysia such as Penang, Perlis and north Perak, were placed under the NCER. With huge agricultural land endowment, the NCER was set to transform the region into a modern food zone for Malaysia, helping the country to increase its efficiency in food production. The NCER blueprint has classified 40% or 932,581 ha in the northern region (4.9% in Penang, 6.6% in Perlis, 27.8% in Perak and 60.7% in Kedah), for agricultural use (NCIA, 2009). Among the main agricultural sub-sectors that have been given serious attention under this development policy are paddy, livestock and aquaculture.

Considering that the main economic activity of Kedah is agriculture and it is among the poorer states of Malaysia, the government has promoted aquaculture as a side economic activity for low-income farmers as a way to increase their household income. Most low-income households receive assistance in terms of cash or pond facilities to start their aquaculture project. Training and monitoring are also provided to increase their technical knowledge and skill in operating their aquaculture project. Now, Kedah's aquaculture sub-sector is one of the most successful development programmes in the NCER region, yielding an average annual growth rate of up to 36% for the period 1997 to 2013 (DoF, 2007-2013). In 2013, Kedah produced 9,860 tons of fish,

which came mainly from freshwater (49%) and brackish-water (30%) pond systems, while the remaining 21% came from freshwater and brackish-water cages, cement tanks and cockles, with the involvement of 966 aquaculture farmers (DoF, 2013). The pond system is a very popular system adopted by the farmers; about 95% of freshwater aquaculture farmers and 60% of brackish-water aquaculture farmers were involved in pond system farming in 2010, according to the Department of Fisheries Kedah/Perlis.

The aggregate statistics of production presented above implies the achievement of the first and second objectives of aquaculture development in Malaysia, but do not necessarily reflect the achievement of the third goal i.e. to improve the livelihood of farm families by increasing their household income. Furthermore in Malaysia, data and research regarding the socio-economic status and livelihood of fish farmers are limited, making it difficult to prove that aquaculture development has succeeded in improving the livelihood of farm families in rural areas. Studies on the economics of aquaculture production have been conducted by Linuma, Sharma and Leung (1999); Chua and Teng (1980), but there is no discussion related to fish farmers' livelihood. A great majority of aquaculture development research in Malaysia has concentrated on fish health and disease (Budiati et al., 2013; Harikrishnan et al., 2010; Harikrishnan et al., 2011; Ransangan et al., 2011; Subasinghe & Shariff, 1992), fish genetics (Khaw et al., 2012; Rahim et al., 2012) aquaculture

technology (Retnam et al., 2013; Lananan et al., 2014; Yap & Ong, 1988) and safety of aquacultural food products (Mok et al., 2012).

Lack of information on the status and the potential contribution of aquaculture to the livelihood of farmers might be a major constraint in formulating an effective policy. Baseline and scoping studies are required to determine the contribution of small-scale aquaculture to rural livelihood and to identify priorities for further action, particularly for the freshwater and brackish-water pond systems, as these are the popular systems adopted by most small-scale farmers. Key questions emerging from this scenario are: Depending on the aquaculture system practiced, what are the contributions of aquaculture to farmers' household income? Can aquaculture increase farmers' household income? What are the available livelihood assets possessed by farmers? What are the appropriate livelihood strategies pursued by farmers to increase their household income? What is the influence of this set of livelihood assets and strategies on the livelihood outcomes of farmers? This article sought to describe the contribution of aquaculture to the livelihood of fish farmers in terms of their income distribution by economic activities, livelihood strategies pursued and livelihood asset possession. The relationship of these elements were also analyzed in order to identify the main factors influencing fish farmers' livelihood. Understanding the livelihood of aquaculture farmers is essential as it aids policy-makers

in monitoring and evaluating the success of the aquaculture development projects being implemented.

METHODS

A systematic survey was designed to quantify household livelihood assets (human, physical, natural, social, financial) and to characterise associated livelihood strategies and outcomes. The analytical analysis was then conducted to analyse the relationship between those three elements of livelihood. Most of the Sustainable Livelihood Framework by Carney (1998); Scoones (1998), and Ellis (2000) comprises other components of livelihood such as vulnerability and institution aspects. However, this study focussed on the three elements of livelihood that fell within the individual's control. Structural Equation Modelling (SEM) applied in this study required a set of data answered by individual in the sampled group of respondents that had the same criteria. However, the vulnerability and institutional aspects were beyond the individual's control to answer and must come from other sources. SEM is a technique to specify, estimate and evaluate models of linear relationships among a set of observed variables in terms of a generally smaller number of unobserved variables. SEM models consist of observed variables (also called manifest or measured) and unobserved variables (also called underlying or latent) that can be independent (exogenous) or dependent (endogenous) in nature (Reisenger & Turner, 1999; Shah &

Goldstein, 2006). In the primary form of analysis, SEM carries out factor analysis and multiple regressions analysis simultaneously (Hair, Anderson, Tatham, & Black, 2006).

In this study, the samples were drawn through application of stratified random sampling strategy. The unit analysis for this study was the aquaculture farmer. Aquaculture farmers in this study referred to those who were engaged in aquaculture activity either on part- or full-time basis and who had registered with the Department of Fisheries. Based on the list of aquaculture farmers provided by the Department of Fisheries, the total number of aquaculture farmers for the pond system in Kedah was 854 i.e. 700 from the freshwater pond system and 154 from brackish-water pond system. The sample were then stratified by district. There are eight districts in the mainland of the state of Kedah (Kubang Pasu, Padang Terap, Kota Setar, Pendang, Sik, Baling, Kuala Muda and Bandar Bharu/Kulim). However, for the brackish-water pond system, only three districts were involved (Kubang Pasu, Kota Setar and Kuala Muda), as pond brackish-water farmers were scattered around these areas. The researcher then selected a random sample from each district for the freshwater and brackish-water pond systems. Thus, the sampling procedure consisted of one random sample of freshwater pond farmers in eight districts and one random sample of brackish-water pond farmers in three districts. Finally, an equal ratio of farmers was selected through random sampling to give a total sample size of 216 (171

freshwater farmers and 45 brackish-water farmers) for investigation, representing almost 30% of the total population.

A set of structured questionnaires was developed that consisted of information on various livelihood assets, strategies and outcomes. A face-to-face interview with 216 aquaculture farmers was conducted from October to December 2011. The Structural Equation Modelling (SEM) method was used to analyse the relationship between livelihood asset, strategies and outcomes by using the AMOS version 8 software published by SPSS Inc. The hypothesised model is shown in Figure 1, which assumes that all asset categories namely, human assets, financial assets, physical assest, social assets and natural assets would influence the livelihood strategies that were represented by observed variables of level of Good Aquaculture Practices (GaqP) and the selection of species being cultured (SPECIES) variables in a positive way. All livelihood asset variables were latent variables that were indicated by observed variables of X1 to X12, as shown in Figure 1.

Good Aquaculture Practices refers to aquaculture practices that are environmentally friendly to produce safe and high-quality products and are consistent and competitive based on the criteria, guidelines and standards set by the Department of Fisheries and on international standards (DoF, 2004). In order to collect data on the level of GAqP, the respondents were asked whether they practised every item listed in the questionnaire, which

included 42 variables of GAqP, answering "Yes" if they did practise GAqP and "No" if not. For every item that was practised, the respondent was given a mark. The total marks obtained were then calculates as a percentage figure. At the second stage, the livelihood strategies were hypothesised to influence livelihood outcome variables represented by income from aquaculture (Yaqua), total household income (Ytotal) and four self-perceived impact variables. These impact variables were categorised into economic impact (EI), social impact (SI), social cost (SC) and environmental impact (EI); latent variables were indicated by observed variables of B1 to EC3. Table 1 shows the description of variables used in the model, which comprised five livelihood asset groups, strategies and outcomes.
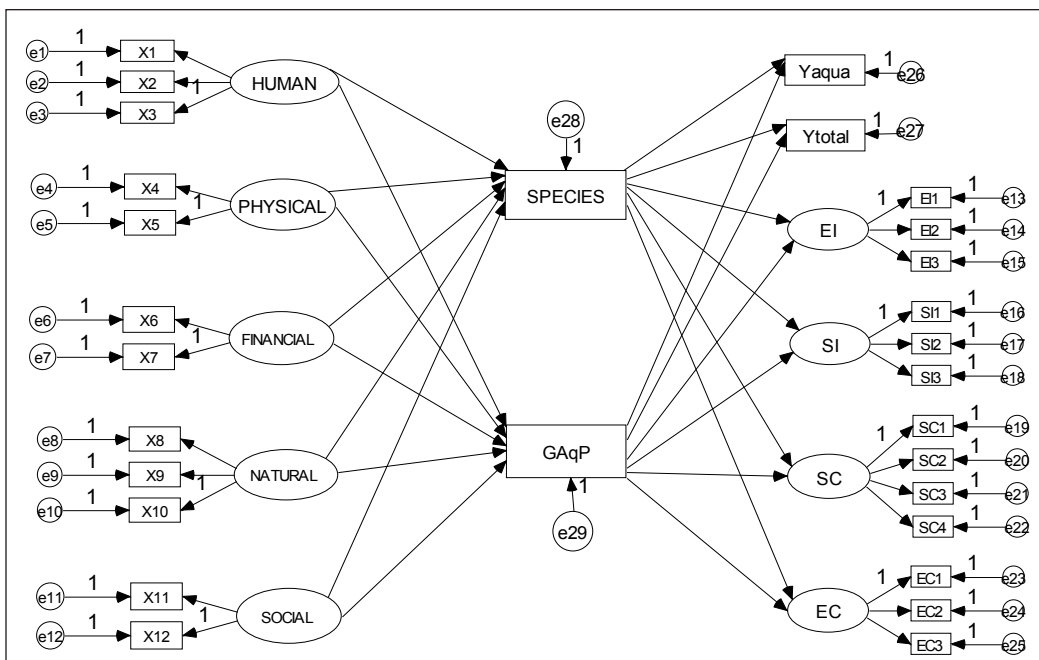
Figure 1. Hypothesised model of the relationship between fish farmers' livelihoods assets, strategies and outcomes

Table 1
List of variables by type of livelihoods assets, strategies and outcomes

Livelihood Elements	Description of Indicators	Symbol
Human asset	Farmers' experience in aquaculture activity (Year)	X1
	Farmer's education level (ranking 1-6) 1. No school 2. Completed primary school 3. Completed lower secondary school 4. Completed upper secondary school 5. STPM/certificate/ Diploma 6. Degree and above	X2

Table 1 *(continue)*

Livelihood Elements	Description of Indicators	Symbol

	- Having basic knowledge of aquaculture (scale 1-4)
	   1. Know nothing
	   2. Less
	   3. Intermediate
	   4. Good
		X3

Physical asset	- Distance from pond to nearest town (kilometre)	X4
	- Distance from pond to main road (kilometre)	X5
Financial asset	- Diversification of jobs engaged in by farmers	X6
	- Total operation cost per cycle (RM)	X7
	- Total initial investment cost (RM)	X8
Natural asset	- Distance from pond to water sources (metre)	X9
	- Total area of farm (hectar)	X10
Social asset	- Farmers' perception of their social networking related to aquaculture activity (etc. relatioship with other farmers, retailers and DOF officers (scale 1-5)	X11

	- Level of farmers' involvement in associations:
	  a. Holding position in community
	  b. Holding position in political party
	  c. Involvement in fisheries-related association
	  d. Involvement in agriculture-related association (scale 1-5)
	  1- No
	  2. Involved in at least one item listed above
	  3. Involved in two items listed above
	  4. Involved in three items listed above
	  5. Involved in all items listed above
		X12

Livelihood Strategies	- Selection of culture species (ranking 1-5 according to market price)
	  1- Catfish
	  2- Tilapia/Carp
	  3- Sea Bass
	  4- White Shrimp
	  5- Tiger Shrimp
		SPECIES

	- Level of Good Aquaculture Practice (Percentage)	GAqP
Economic Impact (Objective)	- Total household income (RM/month)	Ytotal
	- Income derived from aquaculture (RM/month)	Yaqua
Economic Impact (subjective)	- Increase in fish farmers' household income - Increase in sale of aquaculture produce - Increase in savings	EI1 EI2 EI3
Positive Social Impact*	- Increase in living standards - Increase in self-confidence level - Increase in technical knowledge related to aquaculture	SI1 SI2 SI3
Social Cost*	- Experience more stress, worry and insecurity - Time with family significantly reduced - The value of surrounding land increased - Increase in theft	SC1 SC2 SC3 SC4

Table 1 *(continue)*

Livelihood Elements	Description of Indicators	Symbol
Environmental Cost*	- Aquacultural activity has been polluting the environment	EC1
		EC2
	- Damage to road near aquaculture site is getting worse	EC3
	- Aquaculture has resulted in noise and smell pollution in community	

Note: * indicates variables based on farmers' perception using a Likert scale of 1-5 (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree)

RESULTS

Description of Livelihood Outcomes, Strategies and Asset Possession

The contribution of aquaculture to livelihood outcomes is quite different between the brackish-water and freshwater pond systems. On average, the total household income for brackish-water fish farmers was higher at RM4, 208 per month compared with that of freshwater fish farmers, who only obtained RM1, 735 per month. The majority (77.8%) of the brackish-water fish farmers had a total monthly income of more than RM2, 000, while most freshwater fish farmers (62.7%) had a total monthly income of less than RM1,500. The contribution of aquaculture to total household income was quite high for brackish-water fish farmers i.e. about 40 to 88% of their total income, but only 17 to 47% for freshwater fish farmers.

The farmers' involvement status in aquaculture probably contributed to the differences in the contribution of aquaculture to the livelihood of farmers. Most of the brackish-water fish farmers (87%) had made aquacultural activity their main occupation. On the other hand, aquaculture was not a major economic activity for most freshwater fish farmers. However, it was among the best options as a secondary economic activity to increase household income and provide a free source of protein for family members. Their main economic activity was agriculture-based such as rubber tapping and paddy farming. The combination of aquacultural and agricultural activities was a popular livelihood option, and 62% of freshwater fish farmers had chosen this combination. As for the brackish-water system, 47% of the farmers were involved in other economic activities as a supplement to their involvement in aquacultural activities; were either involved in other agricultural activities (27%) or non-agricultural activities (18%); or were involved in a combination of these three activities (2%).

Economic activity is more diverse for freshwater fish farmers compared with brackish-water fish farmers' about 90% of freshwater fish farmers are involved in at least two economic activities to earn an income. This fact can be related to the type of species cultured in both systems. The popular species cultured by freshwater fish farmers in this study area was catfish and tilapia while tiger shrimp and white shrimp were the main species for the brackish-water environment. The biological differences

between these species require different care, time and pond management from the farmers. The brackish-water species is more sensitive and risky, requiring more attention from the operator. Cost and return pattern as shown in Table 2 are also among the factors why most brackish-water farmers involve in aquaculture on full-time or part-time basis have to diversify their livelihood strategies.

Table 2
Structure of cost and return for small-scale aquaculture in state of Kedah, Malaysia

Cost Component	Brackish-Water		Freshwater		
	Black Tiger Shrimp	White Shrimp	Catfish	Polyculture of Carp	Tilapia
Average Farm Size (hectare)	0.81	1.76	0.37	0.31	0.36
Gross Profit (RM/ha)	55,153	83,341	4,392	2,355	2,771
Revenue (kg/ha)	3,052	7,411	1,584	559	587
Variable Costs (RM/ha)	**29,561**	**20,428**	**3,340.29**	**1,441.38**	**1,523.21**
Seed	3,050	3,979	1,224.83	516.86	409.87
Feed	14,595	5,969	1,032.47	279.75	429.71
Labour	2,696	4,082	1035	600.00	600.00
Lime/Fertilizer	1,845	550	47.33	44.77	83.63
Energy (electricity, diesel)	4,208	4,516	Na	Na	Na
Maintenance	2,512	900	Na	Na	Na
Others	655	432	Na	Na	Na
Fixed Costs (RM/ha)	**2,927**	**6,210**	82.50	50.96	55.33
Land Rent	28	135	70.00	38.46	35.00
Land Tax	19	-	12.50	12.50	20.33
Depreciation on Capital Goods (Over 10 years)	2,879	6,075	Na	Na	Na
Total cost	**32,488**	**26,638**	**3,422.79**	**1,492.34**	**1,578.54**
Gross Margin (RM/ha)	25591	62913	1,051.78	913.50	1,247.84
Net Profit (RM/ha)	22,664	56,703	2619.68	2782.39	3312.53

The difference in type of species cultured, inputs used and size of pond contributes to the differences in the cost of production and profit earned by fish farmers. In terms of production, white shrimp farmers obtain the highest production of about 7.4 tons/ha, generating an average net profit per cycle of RM56,703/hectare with an average production cost incurred of RM26,638/hectare/cycle. Furthermore, it was a first attempt for most white shrimp farmers, who had originally farmed black tiger shrimp before making the switch after an outbreak of Early Mortality Syndrome (EMS) hit most black tiger shrimp farms in Malaysia. EMS typically affects shrimp during the first seven to 40 days after culturing. Thus, to prevent greater losses,

most farmers harvested their shrimp before they had reached marketable size and sold it at the low price of RM12 to RM15 per kg at the average size of about 0.016 g per shrimp, generating a net profit of RM22,664/cycle/ha, which was two times lower than usual. For freshwater aquaculture, tilapia farming is the most profitable compared to catfish and polyculture of carps, generating a net profit of RM3,312/cycle/ha. This shows that there is an immense difference in terms of cost and return structure for freshwater and brackish-water species. This is why most freshwater aquaculture farmers become involved in aquaculture as a secondary activity on top of other agricultural activities.

In fact, the cost and return structure in aquaculture also depends on the level of pond management, while pond management is influenced by the status of the farmer's involvement in aquaculture. Pond management is an important aspect in determining the sustainability of an aquaculture project. The Code of Good Aquaculture Practices (GAqP) was introduced by the Department of Fisheries to provide a practical guide for fish farmers about the key aspects of fish farm management to ensure the production of good quality and safe products that can be marketed widely and at the same time not harm the environment (DoF, 2004). Farm management aspects outlined in the GaqP include the preparation of the pond; the management of seed, water, feed, fish health and waste; harvesting and post-harvest handling; and data recording (DoF, 2004).

The results revealed that the management of pond by brackish-water fish farmers was better than that by freshwater fish farmers, whereas 77% of brackish-water fish farmers adopted the GAqP at a level of 60% and above compared with only 20% of freshwater fish farmers. The low level of GAqP practice among freshwater famers, especially for catfish, was due to the usage of low quality and unhygienic feed and mismanagement of water quality. Although freshwater species such as catfish and tilapia are quite hardy, hardiness is not an advantage for freshwater operators as they are still required to take care of the environmental aspects of the aquacultural project. On the other hand, as for brackish-water pond farmers, the biological aspect of brackish-water species such as tiger prawn, white shrimp and sea bass require great care in terms of seeding rate, nutrition and the environment. Hence, both systems have to comply with the GAqP to ensure a high survival rate and to produce the best quality products.

Due to the high risk of brackish-water aquaculture, high investment and operating costs and technical knowledge are required, implying that the farmer's livelihood assets for this system are better than those of the freshwater system farmer. The results showed that most brackish-water farmers are younger, educated and experienced, as shown in Table 3. The majority (35.56%) of brackish-water farmers in the sample were aged between 40 and 49 years compared with freshwater fish farmers, who were mostly 50 to 59 years old. In terms of

education, the majority of brackish-water farmers (62%) had attained at least a PMR/SRP/LCE certificate at lower secondary school level, while 62% of freshwater fish farmers were made up of those with primary school qualification and lower (never been to school). As for experience, 75% of the brackish-water fish farmers had experience of more than five years and about 63% of freshwater fish farmers had less than five years' experience. In fact, 35% of the brackish-water fish farmers had more than 10 years' experience. The results also showed that only 23.60% of freshwater fish farmers and 40% of brackish-water fish farmers had attended aquaculture courses that were mostly organized by the Department of Fisheries.

As for financial assets, the majority (71%) of the fish farmers used their own financial resources and were more likely to borrow money from relatives and friends. Due to the high investment costs, about 18% of brackish-water fish farmers were financed by commercial banks and certain agencies. In addition, 11% of the fish farmers received assistance from government agencies to start their project under certain schemes such as the 'Integrated Agriculture Development Project' (IADP) in the 1980s and the AZAM project in 2000s monitored by the Department of Fisheries. The percentage of freshwater fish farmers who used their own financial resources was higher than that of the brackish-water fish farmers due to the cost of investment that was far lower than for brackish-water aquaculture that ranged between RM3,000 and RM10,000 depending on the size of the pond.

Water and land resources are the two important natural assets of fish farmers. Usually, aquaculture ponds are located near

Table 3

Percentage of famers according to the status of Human Asset Indicators

Items	Freshwater	(N=171)	Brackish-Water	(N=45)
	No	(%)	No	(%)
Age of Fish Farmer				
29 years old and below	4	2.5	3	6.7
30-39	14	8	10	22.2
40-49	46	26.7	16	35.6
50-59	64	37.3	11	24.4
60 years old and above	44	25.5	5	11.1
Education Achievement				
Never been to school	21	12.4	5	11.1
Primary school	84	49.1	4	8.9
Lower Secondary school (PMR/SRP/LCE)	44	25.5	16	35.6
Upper secondary school (SPM/SPMV/MCE)	17	9.9	12	26.7
STPM/Diploma/Skill Certificate	2	1.2	6	13.3
Degree/Master/PhD	3	1.9	2	4.4

Table 3
Percentage of famers according to the status of Human Asset Indicators

Items	Freshwater	(N=171)	Brackish-Water	(N=45)
	No	(%)	No	(%)
Experience in Aquaculture				
Less than 5 years	107	62.7	11	24.4
Between 6 and10 years	24	14.3	18	40
Between 11 and 15 years	15	8.7	8	17.8
Between 16 and 20 years	9	5	6	13.3
20 years and above	16	9.3	2	4.4
Attending Aquaculture Training/Course				
Yes	40	23.6	18	40
No	131	76.4	27	60

Source: Analysed from survey data

a river or the sea. The average distance from the aquaculture pond to the water resource in this study was 0.1 miles for freshwater and 0.21 miles for brackish-water aquaculture. With regard to land tenancy, the majority (94.4%) of freshwater fish farmers owned their land, with the average farm size being 0.48 ha. However, different scenarios were true among the brackish-water aquaculture farmers, with only 28.9% of the fish farmers owning their land. The remaining 60% rented their land from others and 11.1% who were renting government reserve land had been granted temporary ownership. The average brackish-water farm size was 1.21 ha.

In terms of social assets, indicators such as holding an important position in society and political parties and involvement in associations related to aquaculture or other agricultural activities among the variables were considered in this study. Only 33.33% of brackish-water fish farmers and 28.57% of freshwater fish farmers held important positions in political parties. In fact, the results also showed that nearly 70% of freshwater fish farmers and 88% of brackish-water fish farmers did not engage in agriculture-related associations.

Physical assets include infrastructure such as roads, fences, storage, gates and retention ponds. Overall, the fish farming equipment of brackish-water farmers was more complete than that of freshwater farmers. This was due to activities such as tiger and white shrimp farming that are more complicated compared with freshwater species farming such as catfish and tilapia farming. In addition, the distance of the aquaculture pond from major infrastructure such as the main road, wet market and relevant institutions or agencies responsible for aquaculture development might also contribute to the expanding in aquaculture production.

Relationship between Livelihood Components

The Structural Equation Modelling analysis showed only human, financial and physical assets were significant influences on GaqP with a probability value less than 0.05, shown in Table 4. The positive sign for the standardized coefficient value of human and financial assets means increasing human assets (indicated by education level and experience in aquaculture farming) and financial assets (indicated by investment and operating costs) will increase the level of GAqP. However, the negative sign for the standardized coefficient value of physical assets (indicated by distance of pond to main road and town) suggests that remote aquaculture ponds i.e. those far from main roads and towns have fewer GAqP and vice versa. Natural and social assets do not significantly affect GaqP. In fact, indicators that represented social assets were removed from the model due to a multicollinearity problem with a coefficient value more than one. This is why the social asset variable was not included in Table 4. For livelihood strategy of species cultured (SPECIES), only financial assets were significant influences showing a positive sign, meaning that the greater the number of financial assets possessed by farmers, the higher the value of the species to be cultured.

Table 4
Influence of livelihood assets on livelihood strategies

Livelihood Strategy	Livelihood Assets	Standardised Coefficient	Standard Error	Critical Ratio Value	Probability Value
Level of Good Aquaculture Practice (GAqP)	Human	0.535	0.324	4.978	***
	Financial	0.318	0.000	3.320	***
	Physical	-0.223	0.255	-2.388	0.017
	Natural	0.092	0.000	1.224	0.221
Selection of Species to Be Cultured (SPECIES)	Human	0.068	0.020	0.920	0.358
	Financial	0.777	0.000	6.948	***
	Physical	0.045	0.019	0.578	0.564
	Natural	0.010	0.000	0.152	0.879

As for livelihood outcomes, there were variations in the influence of livelihood assets and the variables of livelihood strategies. This is highlighted in Table 5, which shows that most of the asset groups had a significant influence on livelihood outcome variables either through direct or indirect relationship, while the livelihood strategies showed a weak influence on most of the livelihood outcome variables. For example, the level of Good Aquaculture Practice (GAqP) was not significant in influencing Yaqua, YE and YS, but it was significant in influencing the Ytotal. However, the coefficient value equal to 0.187 indicated a weak relationship between these two variables. On the other hand, the results suggested that increasing the level of

GaqP practice would reduce the social and environmental costs incurred, since GAqP variables showed significant relationship with social cost and environmental cost variables in a negative way.

The same scenario was true for species cultured strategy, since it was not significant in affecting the income derived from aquaculture (Yaqua), total household income and economic impact variable (YE). However, this strategy did influence the social impact, social costs and environmental costs in a positive way. This means if the farmers choose to culture a high-value species, their confidence level and technical knowledge related to aquaculture would increase, but at the same time they had to bear the social costs such

Table 5

Influence of livelihood assets and livelihood strategies on livelihood outcomes

Livelihood Outcomes	Livelihood Assets and Strategies	Standardised Coefficient	Standard Error	Critical Ratio Value	Probability Value
Income from Aquaculture (Yaqua)	GAqP	0.038	7.996	0.681	0.496
	SPECIES	-0.118	244.940	-0.776	0.438
	Financial	0.664	0.039	3.510	***
	Natural	0.448	0.003	7.693	***
Total Household Income (Ytotal)	GAqP	0.187	3.348	2.928	0.003
	SPECIES	-0.056	37.297	-0.889	0.374
	Natural	0.389	0.001	5.932	***
	Human*	0.332	-	-	-
	Social*	-.200	-	-	-
Economic Impact (EI)	GAqP	0.115	0.005	1.299	0.194
	SPECIES	0.155	0.058	1.681	0.093
	Physical	-0.205	0.015	-2.042	0.041
	Social	0.271	0.119	2.787	0.005
Social Impact (SI)	GAqP	-0.104	0.004	-0.883	0.377
	SPECIES	0.319	0.039	2.860	0.004
	Social	0.319	0.176	1.232	0.218
	Human	0.606	0.028	2.072	0.038
	Financial*	0.215	-	-	-
Social Cost (SC)	GAqP	-0.391	0.004	-4.431	***
	SPECIES	0.396	0.040	5.225	***
	Social	-0.131	0.099	-1.364	0.173
	Human*	-0.182	-	-	-
	Financial*	0.183	-	-	-
Environmental Cost (EC)	GAqP	-0.306	0.003	-3.197	0.001
	SPECIES	0.219	0.029	2.396	0.017
	Human*	0.178	-	-	-
	Financial*	0.267	-	-	-

Note: * shows indirect influence

as stress, worry and anxiety if something adverse happened to their aquaculture activity. The culture of high-value species such as tiger shrimp and white shrimp is a high-risk activity that needs intensive care. The analysis also found that the higher the value of the species being cultured the greater the impact on the environment. This was due to the high value of the species such as tiger shrimp and white shrimp, which require a variety of inputs, particularly fertilisers and antibiotics compared with low-value species like catfish and tilapia.

As for livelihood assets, the results showed that the financial assets and natural assets significantly affected the farmers' income derived from aquaculture activity (Yakua) directly with a positive relationship,

meaning an increase in both assets would increase income from aquaculture activities. As for total household income, natural assets appeared as a very significant component in influencing household income, with a coefficient value of 0.389, followed by human assets (0.332) and social assets (-0.200). Human assets and financial assets significantly influenced the social impact (SI) and environmental cost (EC) variables, while physical assets and social assets significantly influenced the economic impact variables indicated by an increase in aquaculture sales, household income and savings. The summary of the relationships between the three components is presented in Figure 2.
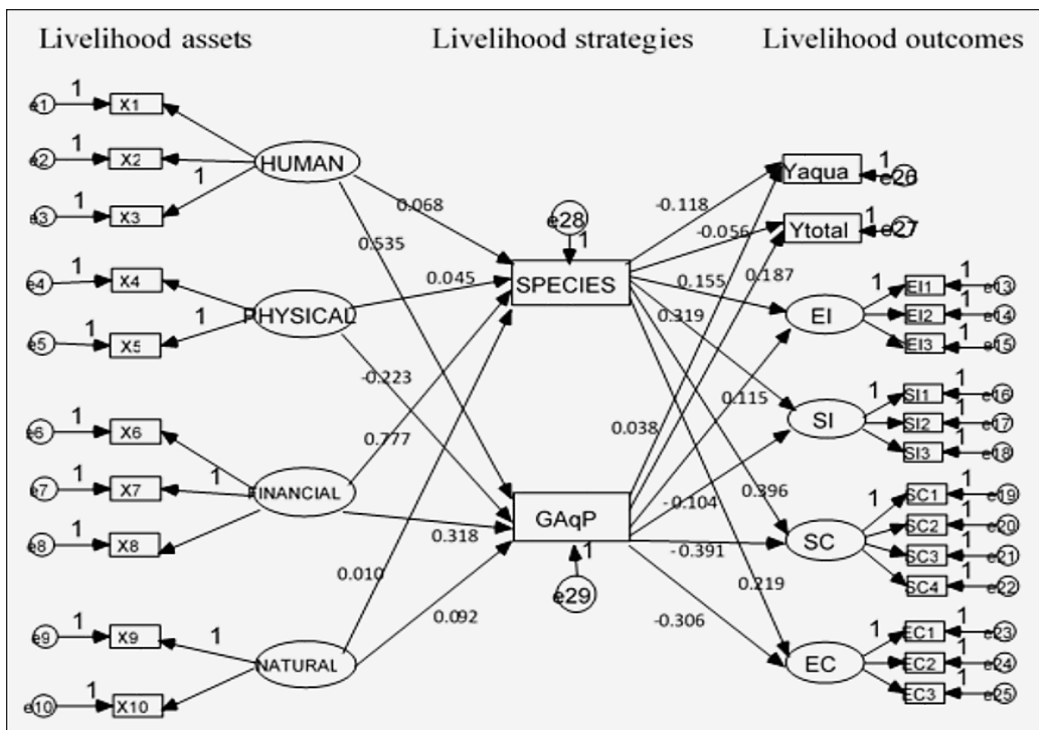
Figure 2. Final model of the relationship between fish farmers' livelihood assets, strategies and outcomes

DISCUSSION

This study showed there were significant differences between freshwater and brackish-water systems, particularly in terms of profitability and contribution to the livelihood of farmers. The freshwater system was an alternative side economic activity for the rural population for improving their household income by utilising available land, while the brackish-water system is seen as a career option in modern agriculture. Most brackish-water farmers are younger at 40 to 49 years old and are educated and experienced. This is quite consistent with the study done by Ifejika, Ayanda and Sule (2007), which reported that about 60% of Nigerian fish farmers were 41 to 50 years old. In Asia, according to Dey et al. (2008), the average age of fish farmers is 43 to 52 years.

However, most freshwater farmers are quite old, ranging in age from 50 to 59 years old and have less experience and limited knowledge about aquaculture. Most of them are involved in aquacultural activity and are receiving assistance from the government either in terms of capital, input and farm equipment. To retain this group in the sector, encouragement to attend training in aquaculture should be emphasised to increase their interest, knowledge and skills. Regular visits by fisheries officers are also important for monitoring their progress. On the other hand, the production and profitability of the freshwater aquaculture system can be enhanced by intensification and modernisation. The young generation should be encouraged to be involved in this sub-sector, since age has significant implication on the modernisation of the sector. The youth are fast learners, energetic and innovative compared with older groups, who tend also to be slow to accept change, being more comfortable with the traditional way of conducting activities (Malaysian Institute Economic Research [MIER], 1999); however, to ensure the efficiency, productivity and competitiveness of the sector, the use of modern technology is a must. Experience in aquaculture activity is crucial and it contributes to the success of Asian aquaculture (Sevilleja, 2000; Dey et al., 2008; Edwards, 2000). In fact, farmers' experience in aquaculture can reduce management risk (Krause, 1995). Fish farmers can enhance their aquaculture knowledge by attending courses or training related to aquaculture organised by various agencies.

The good profit generated by the brackish-water system can attract the involvement of educated youths in this sector. Farm renting could be an alternative means for promoting and attracting youths to fish farming (Ifejika et al., 2007) since land is the main obstacle preventing youths from getting involved in agricultural activity. This study has proven that most brackish-water farmers earn a high profit although they are renting their farms. Tenancy status does not limit the output produced, but rather, motivates the producer to achieve a maximum benefit (Sevilleja, 2000).

The significant influence of livelihood asset components on livelihood strategies and livelihood outcome variables has

shown that it is an important element in fish farmers' livelihood. Based on the strong relationship between most of the livelihood strategies and outcomes variables, it would be wise to enhance the related human and financial assets in order to improve the living standard of fish farmers. The results showed that human assets had a positive influence on the level of GaqP, total household income, social impact and social cost, implying that measures relating to the enhancement of farmers' knowledge should be emphasised. Educated and experienced fish farmers will consider practising GaqP in order to produce high quality products that can be sold at a high price and obtain a higher profit. However, the result showed only 23.60% and 40% of freshwater and brackish-water fish farmers, respectively, attended courses on aquaculture. Only by attending such an aquaculture course, can fish farmers be well-exposed to GaqP. Information dissemination about aquaculture courses should be expanded either through electronic media or print media since these are the most convenient media that are accessible to everyone. This is to ensure that all information about aquaculture training and courses can reach everyone, especially new entrepreneurs. In addition, teaching modules should be concise and use simple language that is easily understood by farmers. Aquaculture training also should be provided to extension officials in order to ensure that they have sufficient and adequate knowledge and skills to train the farmers.

Financial assets are the most important factor affecting the level of GaqP practised and selection of species being cultured. Investment and operating cost are high, especially for the brackish-water system, and most farmers use their own financial resources or are likely to borrow from relatives rather than financial institutions due to the difficulty they face in acquiring credit. Credit institutions should review the conditions and procedures of credit or loan schemes by taking into account the importance of small-scale farmers in aquaculture development. Furthermore, in Malaysia almost 70% of farmers are in the small- and medium-scale category (DOF, 2016). Most of them cannot apply for a bank loan due to the lack of assets or resources to be used as collateral. Therefore, credit institutions should provide credit or loan schemes with simpler procedures that specially cater for small-scale farmers by considering their unique profile.

The insignificant result for the influence of social assets on livelihood strategies might be due to the use of indicators (as listed in Table 1) that are not too relevant to this study as most of the farmers used their private resources. These indicators might have been more relevant if aquaculture were more reliant on common-property resources. As for natural assets, it is supposed to be an important influence on livelihood strategies. However, the results showed there was no correlation between natural assets and GAqP or the species cultured. As brackish water is required for producing high-value shrimp, water salinity should be used as one of the indicators.

The Code of Good Aquaculture Practices (GaqP) is used to measure pond management by farmers. Many international bodies such as the Food and Agriculture Organization (FAO) recognise that Good Aquaculture Practices or Best Management Practices play an important part in the sustainable development of aquaculture for both large-scale and small-scale producers (FAO, 2006). The results show that the level of GaqP among freshwater farmers is lower compared with among brackish-water farmers due to biological differences of species cultured and lack of knowledge and information related to the practice. Furthermore, shrimp aquaculture in brackish-water ponds is a high risk activity particularly for intensive production and it requires better standards for compliance with export standards.

Nevertheless, the SEM analysis found no significant influence of GAqP on income derived from aquaculture, implying that the practice of GAqP had no impact on profit. This means that farmers who do not comply with GAqP will also earn a higher income. In fact, most small-scale farmers in Malaysia supply their produce to domestic markets, where private standards are prevalent; currently, there is no labelling or a special price system that could encourage farmers to practise GaqP. It is likely that only large fish and shrimp farms producing export products will adopt GaqP so as to comply with the product quality requirement for export market.

Thus, the introduction of a labelling and pricing system that can differentiate GaqP produce from non-GaqP produce probably might give an opportunity for consumers to choose a high-quality product produced by the GaqP system. Benefits of GaqP produce must be disseminated to the community to raise awareness about the consumption of high-quality and safe fish. The government can do its part by detailing a description of GaqP that covers the practice, the benefits gained when employers adopt it and possible effects if farmers are not compliant should be extended to all farmers. Then enforcement of GaqP could be implemented by imposing fines or penalties on farmers who refuse to practise it.

CONCLUSION

Most freshwater fish farmers (62%) were not involved full-time in aquaculture; instead, their main economic activity was rice farming, rubber tapping and working in government and private service. On the other hand, for most brackish-water fish farmers (87%), aquaculture is their main economic activity. These percentages also could imply the profitability of both systems; brackish-water aquaculture of shrimp in particular is more profitable compared with freshwater farming of catfish and tilapia. However, based on the farmers' perception analysis, most fish farmers, either freshwater or brackish-water farmers, recognized that aquaculture activities have succeeded in increasing their income. This means that despite the fact that the profits generated by freshwater aquaculture were low, the farmers still felt that the income from aquaculture had succeeded in raising

their total household income together with other sources of income.

However, in order to ensure the sustainability of rural fish farmers' livelihood, measures related to human and financial assets must be given priority since these two factors are the most significant factors determining the livelihood strategies and livelihood outcomes variables. Besides their livelihood, the quality and safety of aquaculture produce also need to be considered by fish farmers as their social responsibility. GaqP is one of the measures for sustainable farm management that could produce safe aquaculture products. Therefore, compliance with the level of GAqP should be further enhanced by all fish farmers.

Fish farmers and fisheries officers must work in cooperation to ensure that fish produced are safe for domestic and foreign consumption. Consumer awareness of the importance of GAqP for producing high quality and safe food should be increased. To date, there is no specific research into consumer awareness of fish consumption. Hence, further research into consumer awareness of fish consumption with regard to GAqP produce should be undertaken. Fish farmers, the Department of Fisheries and consumers should share responsibility for the production of the best quality and safe farmed fish to ensure the sustainability of aquaculture development and hence, the sustainability of small-scale fish farmers' livelihood.

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REFERENCES

Budiati, T., Rusul, G., Wan-Abdullah, W. N., Mat Arip, Y., Ahmad, R., & Thong, K. L. (2013). Prevalence, antibiotic resistance and plasmid profiling of Salmonella in catfish (*Clarias gariepinus*) and tilapia (*Tilapia mossambica*) obtained from wet markets and ponds in Malaysia. *Aquaculture, 372,* 127–132.

Carney, D. (1998). Implementing the sustainable rural livelihoods approach. In D. Carney (Ed.), *Sustainable rural livelihoods, what contribution can we make*, (p. 3–23). London: DFID.

Chua, T. E., & Teng, S. K. (1980). Economic production of estuary grouper, Epinephelus salmoides Maxwell, reared in floating net cages. *Aquaculture*, *20*(3), 187–228.

Dey, M. M., Briones, R. M., Garcia, Y. T., Nissapa, A., Rodriguez, U. P., Taluker, R. K., … & Paraguas, F. J. (2008). Strategies and options for increasing and sustaining fisheries and aquaculture production to benefit poorer households in Asia. *WorldFish Center Studies and Reviews* No. 1823. The WorldFish Centre, Penang, Malaysia.

Department of Fisheries (DoF). (2004). Malaysian aquaculture farm certification scheme (SPLAM). Kuala Lumpur: Department of Fisheries Malaysia.

Department of Fisheries Kedah/Perlis. (2010). List of aquaculture farmer in the state of Kedah/Perlis. 2010, Mac (in Malay). Kuala Lumpur: Department of Fisheries Malaysia.

Department of Fisheries (DoF). (2007-2016). Annual fisheries statistics 2007-2016. Kuala Lumpur: Ministry of Agriculture and Agro-Based Industry Malaysia.

Department of Statistics. (2012). Selected agricultural indicators 2012. Kuala Lumpur: Department of Statistics Malaysia.

Department of Statistics. (2013). Selected agricultural indicators 2013. Kuala Lumpur: Department of Statistics Malaysia.

Edwards, P. (2000). Aquaculture, poverty impacts and livelihoods. *ODI Natural Resource Perspective* No. 56. London: ODI.

Edwards, P., & Demaine, H. (1997). Rural aquaculture: Overview & framework for country reviews. *RAP Publication* no. 1997/36. Bangkok: RAP/FAO.

Ellis, F. (2000). The determinants of rural livelihood diversification in developing countries. *Journal of Agricultural Economics, 51*(2), 289–302.

EPU (Economic Planning Unit). (2014). Regional corridor development in Malaysia. Kuala Lumpur: Malaysian Prime Minister's Department. Retrieved May 6, 2016, from http://www.carecprogram.org/uploads/events/2014/CAREC-IMT-Workshop-KL/Presentation-Materials%20/009_134_209_Regional-Corridor-Development-in-Malaysia.pdf

Food and Agriculture Organization. (1996). Report of the expert consultation on small scale rural aquaculture. Retrieved May 8, 2016, from http://www.fao.org/docrep/x5821e/x5821e06.htm#TopOfPage

Hair, J. H., Anderson, R. E., Tatham, R. L., & Black, W. C. (2006). *Multivariate data analysis* (2nd ed.). New Jersey: Prentice-Hall.

Harikrishnan, R., Balasundaram, C., & Heo, M. S. (2010). Molecular studies, disease status and prophylactic measures in grouper aquaculture: Economic importance, diseases and immunology. *Aquaculture, 309*(1-4), 1–14.

Harikrishnan, R., Balasundaram, C., & Heo, M. S. (2011). Fish health aspects in grouper aquaculture. *Aquaculture*, *320*(1-2), 1–21.

Ifejika, P. I., Ayanda, J. O., & Sule, A. M. (2007). Socio-economic variables affecting aquaculture production practices in Borgu local government area of Niger state Nigeria. *Journal of Agriculture and Social Research*, *7*(2), 20–28.

Khaw, H. L., Ponzoni, R. W., & Hamzah, A., Abu-Bakar, K. R., & Bijma, P. (2012). Genotype by production environment interaction in the GIFT strain of Nile tilapia (*Oreochromis niloticus*). *Aquaculture*, *326–329*, 53–60.

Krause, M. (1995). Practical framing: Rural poverty planning risks management. Australia: Reed International Books.

Lananan, F., Abdul-Hamid, S. H., Din, W. N. S., Ali, N., Khatoon, H., Jusoh, A., & Endut, A. (2014). Symbiotic bioremediation of aquaculture wastewater in reducing ammonia and phosphorus utilizing effective microorganism (EM-1) and microalgae (Chlorella sp.). *International Biodeterioration & Biodegradation*, *95*, 127–134.

Linuma, M., Sharma, K. R., & Leung, P. S. (1999). Technical efficiency of carp pond culture in Peninsular Malaysia: An application of stochastic production frontier and technical inefficiency model. *Aquaculture, 175*(3-4), 199–213.

Malaysian Institute Economic Research. (1999). Interim report on fisheries development study in Malaysia submitted to the economic planning unit. Kuala Lumpur: Prime Minister's Department.

Mok, W. J., Senoo, S., Itoh, T., Tsukamasa, Y., Kawasaki, K. I., & Ando, M. (2012). Assessment of concentrations of toxic elements in aquaculture food products in Malaysia. *Food Chemistry*, *133*(4), 1326–1332.

Northern Corridor Implementation Authority (NCIA). (2009). Northern corridor economic region – Koridor utara. Retrieved May 8, 2016, from http://www.koridorutara.com.my/download/download/Koridor%20Utara%20Brochure.pdf

Rahim, M. H. A, Ismail, P., Alias, R., Muhammad, N., & Jais, A. M. M. (2012). PCR-RFLP analysis of mitochondrial DNA cytochrome b gene among haruan (*Channa striatus*) in Malaysia. *Gene*, *494*(1), 1–10.

Ransangan, J., Manin, B. O., Abdullah, A., Roli, Z., & Sharudin, E. F. (2011). Betanodavirus infection in golden pompano, *Trachinotus blochii*, fingerlings cultured in deep-sea cage culture facility in Langkawi, Malaysia. *Aquaculture, 315*(3-4), 327–334.

Reisinger, Y., & Turner, L. (1999). Structural equation modeling with Lisrel: Application in tourism. *Tourism Management*, *20*(1), 71–88.

Retnam, A., Zakaria, M. P., Juahir, H., Aris, A. Z., Abdul-Zali, M., & Kasim, M. F. (2013). Chemometric techniques in distribution, characterisation and source apportionment of polycyclic aromatic hydrocarbons (PAHS) in aquaculture sediments in Malaysia. *Marine Pollution Bulletin*, *69*(1-2), 55–66.

Scoones, I. (1998). Sustainable rural livelihoods: A framework for analysis. *IDS working paper* 72. Brighton: IDS.

Sevilleja, R. O. (2000). Adoption and economics of tilapia farming technology in the Philippines. Retrieved May 8, 2016, from state.edu/dept/IIFET/2000/papers/ Sevilleja.

Shah, R., & Goldstein, S. M. (2006). Use of structural equation modeling in operations management research: Looking back and forward. *Journal of Operations Management, 24*(2), 148–169.

Siar, S. V., & Sajise, P. E. (2009). Access rights for sustainable small-scale aquaculture and rural development. In M. G. Bondad-Reantaso, & Prein, M. (Eds.), *Measuring the contribution of small-scale aquaculture: An assessment* (p.87–94). Rome: Fisheries and Aquaculture Department (FAO).

Subasinghe, R. P., & Shariff, M. (1992). Multiple bacteriosis, with special reference to spoilage bacterium Shewanella putrefaciens, in cage-cultured barramundi perch in Malaysia. *Journal of Aquatic Animal Health, 4*(4), 309–311.

Yap, S. Y., & Ong, H. T. (1988). Formulation of aquaculture development at an ox-bow lake in Malaysia. I. Technical Evaluations of Site Suitability. *Aquacultural Engineering, 7*(4), 245–264.

SOCIAL SCIENCES & HUMANITIES

PERTANIKA
JOURNALS

The Persian Soccer Spectator Behaviour Inventory (PSSBI): Development and Psychometric Properties of the PSSBI Using Structural Equation Modelling (SEM)

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ABSTRACT

Psychometric instruments assessing spectator motives for attending professional sports have mostly been validated in a Western context. The present study describes the development of the Persian Soccer Spectator Behaviour Inventory (PSSBI). The 21-item PSSBI was completed by 1385 Iranian spectators. Exploratory factor analysis indicated that the 21 items loaded on four factors: Promotional Incentives, Game Attractiveness, Schedule Considerations, and Economic Considerations. These factors demonstrated acceptable internal consistency and explained 65.48% of the total variance. It is concluded that the resulting 20-item PSSBI is a viable tool for assessing football fans' motives for attending professional football matches in Iran.

Keywords: Football attendance motivation, football marketing, soccer attendance, sports spectatorship

INTRODUCTION

The existence of sports enthusiasts and loyal fans who always turn out to watch a variety of different sports has demonstrated watching live sport is a popular leisure activity (Lera-López & Rapún-Gárate, 2011). Sports marketing has evolved into one of the most lucrative industries of the 21st century (Jackson, Grove, & Mark,

2010; Miller, 2004; Wiid & Cant, 2015) and governments, nations, and organisations worldwide use sports as a means to bring people together, reduce cultural barriers, and heal rifts between people and nations (Wiid & Cant, 2015). The globalisation of sports has also encouraged professional sports clubs worldwide to develop strategies for attracting sponsors (Mirzaei, Mehdipour, & Azmsha, 2015), advertising commercial products, and selling tickets, merchandise and/or players to raise revenue and cover expenses (Williams, 2006).

In recent years, both researchers and practitioners have developed an increasing interest in studying the market demands of sports consumers. Those who run professional teams understand the importance of marketing studies for the financial wellbeing of teams. To a varying extent, the marketing departments of most professional sports teams conduct different types of surveys during the games or via mail. The results of these surveys provide the team's owners with invaluable information regarding the interests of fans (i.e., spectators), thereby helping teams with their efforts to attract and retain fans. Leading theorists in the field of sports marketing have confirmed the use of these marketing efforts and indicate the necessity of establishing a management information system for professional sports teams (Mullin, Hardy, & Sutton, 2014). Nonetheless, the information obtained from these studies is only as good as the quality of the collected data. The availability of

instruments with robust measurement properties is essential for such marketing research activities.

Consequently, researchers have investigated spectator behaviour and identified a number of factors that play a critical role in attracting spectators to sports events (Gitter & Rhoads, 2010; Kim & Trail, 2010; Kim, Trail, & Magnusen, 2013; Trail, Robinson, & Kim, 2008; Wann, Grieve, Zapalac, & Pease, 2008). Specific interest lies in identifying both the motivating factors behind the intention to attend sporting events (e.g., filling their leisure time, supporting their favorite teams, discharging their emotions, etc.) (Gau, 2013; Ghasemi, Sofla, Heidari Nejad, & Azmsha, 2015; Trail & James, 2001) and the constraints restricting such attendance (Trail et al., 2008). Other factors include attractiveness considerations (e.g., the quality of competition, the presence of star players, and the results of record-breaking competitions); encouraging factors (e.g., the colour of team clothing, entertainment, advertisements, and awards) (Pilus & Hussin, 2013); economic factors (e.g., ticket price, seating cost, transportation, parking, and fees) (Kafkas, Çoban, & Kafkas, 2012); planning factors (e.g., access to the stadiums, time of the competitions, stability of the schedules, and announced program) (Funk, Ridinger, & Moorman, 2003); emotional factors (e.g., motivation, team identification, vicarious victory, as well as mental and emotional energy depletion) (Trail & James, 2001); and demographic

factors (e.g., gender, marital status, family economic status, and educational level) (Zhang, Pease, Hui, & Michaud, 1995).

Studies focusing specifically on attendance motives within soccer fans have supported and extended these findings. For example, in an examination of Australian soccer fans, Neale and Funk (2006) found that socialisation, entertainment, and vicarious victory were positively correlated with re-attendance behaviour. Simultaneously, an interest in specific players was negatively correlated with re-attendance. In another study of attendance-related factors, Bauer, Sauer and Exler (2005) found that club branding significantly predicted spectator involvement and allegiance for German soccer fans. Among Japanese and South Korean soccer fans, factors related to spectator involvement have included team identification, family bonding, social interaction, appreciation of skilled performance, community pride, entertainment/fun, excitement/drama, interest in specific players, vicarious achievement, and escape from problems (Won & Kitamura, 2006). Findings suggest that excitement/drama, entertainment/fun, and vicarious achievement are strong spectator motives for soccer fans in both countries, and that team identification/allegiance is associated with frequency of attendance.

Existing instruments for assessing spectator motives have often been designed for generic use across a variety of sports and have mostly been validated within Western cultural contexts, e.g., Fan Attendance Motivations (FAM) by Kahle, Kambara and Rose (1996), Motives of the Sports Consumer (MSC) by Milne and McDonald (1999), Sports Interest Inventory (SII) by Funk, Mahony, Nakazawa and Hirakawa (2001). When studies of spectator motives have been conducted in non-Western countries and cultures for sport marketing purposes, there has been a tendency to conduct single-cohort exploratory research without subsequent cross-validation in independent samples. The present study attempted to overcome these limitations by: (a) examining spectator attendance motives within a specific sport context (i.e., professional soccer) and a specific non-Western cultural context (i.e., Iran); and (b) cross-validating initial findings within an independent, hold-out sample from the initial dataset. Doing so will provide sports marketers with information that will be useful for developing effective communication strategies and maximizing soccer spectator involvement in this context.

METHODS

Participants

Data were collected from adolescents, adults, and older adults. More specifically, the research population included all spectators who attended one of 18 professional football matches in the ninth tournament of Iranian clubs in the Iranian Premier League (IPL). According to IPL statistics, this population comprises approximately 150,000 people. Based on Cochran sampling formula calculations and sampling error considerations,

1461 spectators were selected from this population via purposive classification and proportional allocation among all stadiums hosting the soccer matches. The participants ranged in age from 15 to 68 years (Median=30 years, M=21.72 years; SD=9.26), with approximately 26% married and 74% single. All of the respondents were men. In terms of education, 44% had not completed high school, 15% had completed high school, 28% held associate or college degree, and 11% held advanced degrees. The participants represented various occupational backgrounds, and the mean annual household income was approximately US$6100.

Instrument Development Procedures

The instrument presented to the participants – the Persian Soccer Spectator Behaviour Inventory (PSSBI) – was developed specifically for the present study in a series of steps. More specifically, a preliminary item bank was developed based on published literature on spectator attendance motives across various types of sports in addition to qualitative interviews with 75 football fans. As part of this process, the range and type of item content covered by existing observer-rated and self-reported spectator behaviour instruments were reviewed (Zhang et al., 1995). These draft items were then subjected to several iterations of review and revision by a panel of experts before deciding on a final set of draft attendance motive items that were refined further via cognitive debriefing interviews with 34 individuals (Bonner et al., 2015). Cognitive debriefing interviews are designed to determine whether respondents understand the instructions, content of items, recall period, and response scales of a self-reported instrument (Revicki et al., 2009). Based on feedback obtained from these cognitive debriefing interviews, several of the draft items were modified to increase respondent understanding. These modifications resulted in a final set of 21 items covering different types of attendance motives (see Appendix 1). Response options for the final item set comprised a five-point Likert scale, with 1 indicating "very important" and 5 indicating "not very important." The reliability of the 21 items was assessed in an exploratory factor analysis with a Cronbach's alpha of 0.90. Table 1 demonstrates that the reliability for the different components in this scale ranged from 0.76 to 0.88.

Table 1
Summary of results from the exploratory factor analyses

Factors	Items	Factor 1	Factor 2	Factor 3	Factor 4
Promotional Incentives	Item1	0.891			
	Item2	0.717			
	Item 3	0.821			
	Item 4	0.713			
	Item 5	0.624			

Table 1 *(continue)*

Factors	Items	Factor 1	Factor 2	Factor 3	Factor 4
Game Attractiveness	Item 6		0.848		
	Item 7		0.825		
	Item 8		0.816		
	Item 9		0.588		
	Item 10		0.819		
	Item 11		0.623		
	Item 12		0.889		
Scheduling Considerations	Item 13			0.801	
	Item 14			0.783	
	Item 15			0.627	
	Item 16			0.896	
	Item 17			0.563	
Economic Considerations	Item 18				0.799
	Item 19				0.740
	Item 20				0.845
Cronbach's alpha		0.88	0.80	0.76	0.87
Kaiser-Meyer-Olkin Measure (KMO): 0.83					
Barlett's Test of Sphericity: < 0.001					

Note. Only factor loadings above 0.40 are shown.

Data Analysis Procedures

The factorial structure of the final item set was examined by conducting exploratory factor analysis (EFA) and then cross-validated with confirmatory factor analysis (CFA) using the Statistical Package for the Social Sciences (SPSS), version 21.0 for Windows (SPSS Inc., Chicago, IL, USA). Independent subsamples were used for the model development (EFA) and confirmation (CFA) analyses. More specifically, the total sample (N=1461) was randomly split into two subsamples using a random case selection procedure. EFA was then performed on data from the first subsample (n=731) using principal components analysis (PCA) with Promax rotation and factor loadings >0.40 on each item considered to belong to the corresponding factors. Scree plot examination and eigenvalues greater than 1 were used for factor extraction, and sampling adequacy was evaluated using the Kaiser-Meyer-Olkin (KMO) measure. The construct validity of the preliminary model was then tested by conducting CFA on the second subsample (n=730). Internal consistency of factors was assessed using Cronbach's α, and the indices employed to assess how well the specified model fitted the data were the chi-square (χ^2) test, comparative fit index (CFI), goodness of fit index (GFI), root mean square error of approximation (RMSEA), and *normed fit index (NFI)* (Gornall et al., 2013; Hashim,

Grove, & Whipp, 2008; Yaghoobi et al., 2015). In this study, convergent validity was calculated and estimated by the size of factor loadings ($\lambda; \geq 0.50$), average variance extracted (AVE; ≥ 0.50), and composite reliability (CR; ≥ 0.70) (Fornell & Larcker, 1981; Hair, 2010).

RESULTS

Model Development

The EFA findings are summarised in Table 1. A KMO measure of 0.83 indicated that the data matrix was suitable for factor analysis. Four factors with eigenvalues greater than 1 emerged from the analysis, with 20 of the original 21 items exhibiting loadings above 0.40 on these factors. None of these items cross-loaded on more than one factor. Together, the four factors accounted for 66.79% of the variance in the data matrix. From a content perspective, the factors appeared to represent attendance motives related to promotional incentives (five items; factor loadings of 0.62-0.89), game attractiveness (seven items; factor loadings of 0.58-0.88), scheduling considerations (five items; factor loadings of 0.56-0.88),

and economic considerations (three items; factor loadings of 0.74-0.84). Internal consistency for the overall scale was 0.90.

Model Confirmation

The EFA results obtained from the first subsample were subsequently evaluated by performing CFA with independent data from the second subsample. A four-factor model was analyzed using the *maximum-likelihood* estimation (MLE) method. The chi-square for the model was significant (i.e., $\chi^2=244.81$, df =236, $p< 0.01$); the goodness of fit indices of the model were within tolerable ranges (e.g., RMSEA=0.06, GFI=0.85, CFI=0.89, IFI=0.88 and NFI= 0.89), indicating that the model was acceptable but failed to provide an excellent fit. Hence, to improve the model, items with the lowest λ values were considered for elimination. A thorough examination of these values indicated that one of the 21 items (uniform colour and design) had low λ values. When this one item was removed, the 20-item four-factor model provided much better results (RMSEA = 0.04, GFI =0.94, CFI =0.92, IFI= 0.94 and NFI=0.93) (Table 2).

Table 2

The main fitting index of the Persian Soccer Spectator Behaviour Inventory

Index	Value via 20 items	Interpretation
Lewis-Tuker (Non-normed fit index, NNFI)	0.92	High fit (≥ 0.9)
Bentler-Bontt's (normed fit index, BBNFI)	0.94	High fit (≥ 0.9)
Hoelter	0.91	High fit (≥ 0.9)
Goodness-of-Fit Index (*GFI*)	0.94	High fit (≥ 0.9)
Comparative Fit Index (CFI)	0.92	High fit (≥ 0.9)
Normed Fit Index (NFI)	0.93	High fit (≥ 0.9)
Incremental Fit Index (IFI)	0.94	High fit (≥ 0.9)
Root Mean square Error (RMSEA)	0.043	High fit ($\leq 0. 08$)

As shown in Table 3, all constructs met the CR (0.70) and AVE (0.50) criterion, supporting convergent validity. A Pearson correlation analysis was conducted to assess the correlation among factors. Correlation coefficients among factors ranged from 0.36 to 0.72. The mean scores of each of the factors ranged from 3.80 (SD =0.41) to 2.94 (SD =0.33) (Table 4).

Table 3

Measurement model of the Persian Soccer Spectator Behaviour Inventory

Construct	Items	Number of Items	Loadings	AVE[a]	CR[b]
Promotional Incentives	Item1	5	0.56	0.595	0.878
	Item2		0.82		
	Item 3		0.86		
	Item 4		0.82		
	Item 5		0.76		
Game Attractiveness	Item 6	7	0.68	0.598	0.912
	Item 7		0.73		
	Item 8		0.80		
	Item 9		0.75		
	Item 10		0.82		
	Item 11		0.84		
	Item 12		0.78		
Scheduling Considerations	Item 13	5	0.92	0.628	0.892
	Item 14		0.81		
	Item 15		0.51		
	Item 16		0.86		
	Item 17		0.74		
Economic Considerations	Item 18	3	0.74	0.672	0.859
	Item 19		0.80		
	Item 20		0.91		

Note: [a]AVE was calculated based on formula given by Fornell and Larcker (1981).

$$AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n}$$
. AVE=$\sum$i=1nλi2n; λ= standardised factor loading n= number of item.

[b]CR was calculated based on formula given by Fornell and Larcker (1981).

$$CR = \frac{(\sum_{i=1}^{n} \lambda_i)^2}{(\sum_{i=1}^{n} \lambda_i^2) + (\sum_{i=1}^{n} \delta_i)}$$.

CR= ($\sum$i=1nλi)2($\sum$i=1nδi); λ= standardised factor loading n, δ= error variance

Table 4

Inter-correlations among the Persian Soccer Spectator Behaviour Inventory

Scales	Mean (SD)	Incentives	Attractiveness	Scheduling	Economics
Promotional Incentive	3.22 (0.34)	1.00			
Game Attractiveness	3.80 (0.41)	0.44	1.00		
Scheduling Considerations	3.36 (0.50)	0.61	0.38	1.00	
Economic Considerations	2.94(0.33)	0.36	0.72	0.55	1.00

DISCUSSION

Football is the most popular sport in the world as well as in Iran. The sport attract the largest number of athletes and spectators when compared to other sports. Going to the stadium is one of many options available for spectators to watch football matches in Iran. The factors that determine the motivation of spectators to attend sporting events can influence the marketing strategy in Iran or even other countries (Fallahi, Asadi, & Khabiri, 2011). The present study aimed to add to existing literature on sports spectators' motivations to attend football game events by developing an assessment instrument – the **Persian Soccer Spectator Behaviour Inventory (PSSBI) –** to evaluate sports spectators' motivations to attend football games in Iran. Reviewing previous psychometric instruments that assessed spectators' motivations to attend sporting events served as the basis for developing a scale to use with Iranian spectators. The theoretical foundations for the present study were highly similar to those reported in earlier research (Lee, 2001; Zhang et al., 1995). Application of extant theory and existing scales provided items that could be translated and rewritten in the Persian language.

After interpreting items and factors, the authors presented a four-factor model. The internal consistency of the subscales was very good, with alpha values for all but one factor exceeding the 0.70 cut-off. The EFA determined that a four-factor model appears adequate to begin explaining the motivations for Iranian football spectatorship (Figure 1). The original scale contains 21 items under four dimensions, namely, Promotional Incentives (five items), Game Attractiveness (seven items), Scheduling Considerations (six items), and Economic Considerations (three items).

In the modified PSSBI, one item was eliminated. The PSSBI exhibited good construct validity as indicated by the close fit of the model to the data. The results show that the PSSBI demonstrated very good psychometric properties to assess sports spectators' attendance consumption behaviour accurately and reliably. Previous instruments assessing spectator motivation (Zhang et al., 1995) did not report the

psychometric properties. Future use if the PSSBI will be useful in allowing researchers to improve their understanding on the effects of motives to attend sporting events (in this case football matches). The PSSBI can assist researchers in contributing to a more advanced understanding of the reasons that a fan commits to a specific sport or team. The development of the scale is timely and may enhance marketing studies involving the professional football league in Iran. The scale also contributes significantly to the study of football spectators by utilizing it validly with the desired target group.
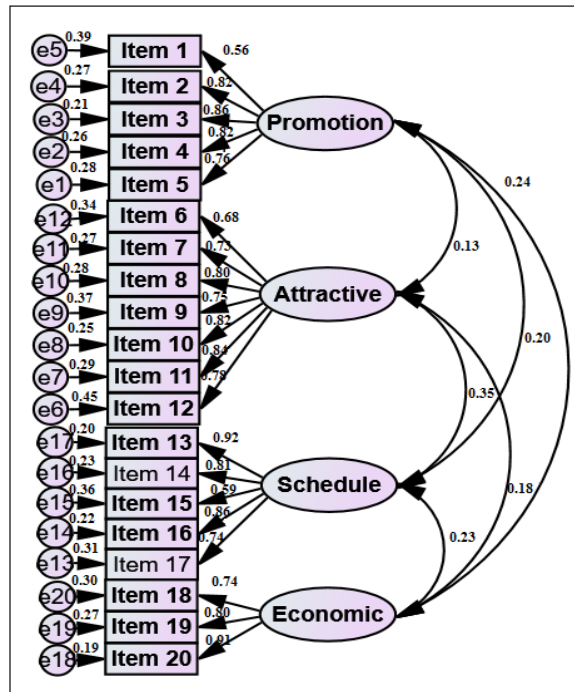
Figure 1. A four-factor Model for the Persian Soccer Spectator Behaviour Inventory obtained using confirmatory factor analysis

The overall psychometric performance of the SSBI may be considered a highly reliable scale, but room for improvement still exists. Future studies should be conducted to replicate the findings of the present study and to continue developing the SSBI. Additional work is necessary to refine and strengthen scale items. Even when the current model fits the data well, one should not ignore the presence of other alternative models (Mccallum, 1995), As emphasised by Loehlin (2004, p. 200), "there is always more than one way to account for a particular set of interrelations among variables" According to Baumgartner and Jackson (1999), apart from examining the factor validity of an instrument, other forms of construct validity, such as discriminant

validity, convergent validity, and divergent validity, should be evaluated whenever possible in future studies. Revalidation will be beneficial if the inventory is adopted by football teams located in other countries. Given the many similarities in terms of organisational management, team marketing, and game operations among teams of different sports at different competition levels, the PSSBI may be adopted further by professional teams of other sports at major or minor league levels. Variables related to the uniqueness of a sporting event must also be included in such revisions.

The study is not without limitations. All the data were self-report (and possibly subject to memory biases and social desirability biases) and the sample was self-selecting and not necessarily representative of all Iranian football spectators. The sample was male only but this is because it is rare that Iranian women attend football matches in Iran. Gender differences may be present and future studies in other countries will need to assess the gender invariance of the scale items.

CONCLUSION

The present study developed and validated the psychometric properties of a new comprehensive instrument to assess motivations in attending live football games, namely the Persian Soccer Spectator Behaviour Inventory (PSSBI). The study identified four factors that are important in assessing spectator behaviour and these subscales exhibited very good internal consistency and reliability. The PSSBI is

therefore a valid and reliable instrument for assessing the motivations of football spectator behaviour in Persian contexts. In summary the resulting 20-item PSSBI is a viable tool for assessing football fans' motives for attending professional football matches and improve the sport marketing in Iran. This inventory will be a good idea for future research in the field of other sport matches in Iran.

REFERENCES

Bauer, H. H., Sauer, N. E., & Exler, S. (2005). The loyalty of German soccer fans: Does a team's brand image matter? *International Journal of Sports Marketing and Sponsorship*, *7*(1), 8-16.

Baumgartner, T. A, & Jackson, A. S. (1999). Evaluating Youth Fitness. Measurement for Evaluation in Physical Education and Exercise Science (pp. 321-346). Boston, MA WBC/Mc Graw-Hill.

Berenson, Gerald S., Srinivasan , Sathanur R., Bao , Weihang, Newman, William P., Tracy , Richard E., & Wattigney , Wendy A. (1998). Association between Multiple Cardiovascular Risk Factors and Atherosclerosis in Children and Young Adults. *The New England Journal of Medicine, 338*(23), 1650-1656. doi:10.1056/NEJM199806043382302

Bonner, N., Abetz-Webb, L., Renault, L., Caballero, T., Longhurst, H., Maurer, M., ... & Zuraw, B. (2015). Development and content validity testing of a patient-reported outcomes questionnaire for the assessment of hereditary angioedema in observational studies. *Health and quality of life outcomes*, *13*(1), 92. doi: 10.1186/s12955-015-0292-7

Fallahi, A., Asadi, H., & Khabiri, M. (2011). The comparison of the importance of the factors affecting spectators' attendance in football

matches in Iranian professional league within age groups. *World Journal of Sport Sciences, 4*(2), 159-165.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 382-388. *18*(3), 382-388. doi: 10.2307/3150980

Funk, D. C., Mahony, D. F., Nakazawa, M., & Hirakawa, S. (2001). Development of the sport interest inventory (SII): Implications for measuring unique consumer motives at team sporting events. *International Journal of Sports Marketing and Sponsorship*, *3*(3), 38-63.

Funk, D. C., Ridinger, L. L., & Moorman, A. M. (2003). Understanding consumer support: Extending the Sport Interest Inventory (SII) to examine individual differences among women's professional sport consumers. *Sport Management Review*, *6*(1), 1-31.

Gau, L. S. (2013). Development of a model connecting self-directive value and satisfaction of sociability needs in sport spectators. *Social Behavior and Personality: An International Journal*, *41*(5), 795-803.

Ghasemi, Mohsen, Sofla, Rashk , Heidari Nejad, Sedigheh, & Azmsha, Tahereh (2015). Recognizing the Restrictions for Spectators to Attend on Football Stadiums. *International Research Journal of Applied and Basic Sciences, 9*(2), 168-171.

Gitter, S. R., & Rhoads, T. A. (2010). Determinants of minor league baseball attendance. *Journal of Sports Economics*, *11*(6), 614-628.

Gornall, B. F., Myles, P. S., Smith, C. L., Burke, J. A., Leslie, K., Pereira, M. J., ... & Forbes, A. (2013). Measurement of quality of recovery using the QoR-40: A quantitative systematic review. *British Journal of Anaesthesia*, *111*(2), 161-169. doi: 10.1093/bja/aet014

Hair, Joseph F. (2010). *Multivariate data analysis*: Pearson College Division.

Hashim, H., Grove, R. J., & Whipp, P. (2008). Validating the youth sport enjoyment construct in high school physical education. *Research Quarterly for Exercise and Sport*, *79*(2), 183-194.

Jackson, B., Grove, J. R., & Beauchamp, M. R. (2010). Relational efficacy beliefs and relationship quality within coach-athlete dyads. *Journal of Social and Personal Relationships*, *27*(8), 1035-1050.

Kafkas, M. E., Çoban, B., & Kafkas, A. Ş. (2012). Sport Fan Motivation Questionnaire: A Study of Validity and Reliability. *Journal of Physical Education & Sports Science, 6*(1), 34-41.

Kahle, L. R., Kambara, K. M., & Rose, G. M. (1996). A functional model of fan attendance motivations for college football. *Sport Marketing Quarterly*, *5*, 51-60.

Kim, Y. K., & Trail, G. (2010). Constraints and motivators: A new model to explain sport consumer behavior. *Journal of Sport Management*, *24*(2), 190-210.

Kim, Y. K., Trail, G. T., & Magnusen, M. J. (2013). Transition from motivation to behaviour: examining the moderating role of identification (ID) on the relationship between motives and attendance. *International Journal of Sports Marketing and Sponsorship*, *14*(3), 35-56.

Lee, S. H. (2001). Factors affecting game attendance decision of volleyball fans in Korea. *The Korean Journa of Physical Education, 40*(2), 469-479.

Lee, W. Y., Ahn, J., Kim, J. H., Hong, Y. P., Hong, S. K., Kim, Y. T., ... & Morisky, D. E. (2013). Reliability and validity of a self-reported measure of medication adherence in patients with type 2 diabetes mellitus in Korea. *Journal of International Medical Research*, *41*(4), 1098-1110.

Lera-López, F., & Rapún-Gárate, M. (2011). Determinants of sports participation and attendance: Differences and similarities. *International Journal of Sports Marketing and Sponsorship*, *12*(2), 66-89. doi: doi:10.1108/IJSMS-12-02-2011-B007

Loehlin, J. C. (2004). *Latent variable models: An introduction to factor, path, and structural equation analysis* (4th ed.). Hillsdale, NJ: Erlbau.

McCallum, John. (1995). National borders matter: Canada-US regional trade patterns. *The American Economic Review, 85*(3), 615-623.

Miller, P. (2004). The Business of Sport Management. *International Journal of Sports Marketing & Sponsorship, 6*(1), 70-72.

Milne, G. R., & McDonald, M. A. (1999). *Sport marketing: Managing the exchange process*. Burlington, US: Jones & Bartlett Learning.

Mirzaei, I., Mehdipour, A., & Azmsha, T. (2015). Analysis of the factors attracting sponsors in the professional sports of Fars province, in Iran. *International Journal of Sport Studies*, *5*(2), 206-213.

Mullin, B. J., Hardy, S., & Sutton, W. (2014). *Sport Marketing* (4th ed.). Champaign, USA: Human Kinetics.

Neale, L., & Funk, D. (2006). Investigating motivation, attitudinal loyalty and attendance behaviour with fans of Australian football. *International Journal of Sports Marketing and Sponsorship*, *7*(4), 12-22.

Pilus, A. M., & Hussin, H. (2013). The Loyalty Attributes and Spectators' Intentions to Watch Football Games: Case Study in Malaysia. *International Journal of Management Sciences and Business Research, 2*(5), 1-4.

Revicki, D. A., Chen, W. H., Harnam, N., Cook, K. F., Amtmann, D., Callahan, L. F., ... & Keefe, F. J. (2009). Development and psychometric analysis of the PROMIS pain behavior item bank. *Pain*, *146*(1-2), 158-169. doi: 10.1016/j. pain.2009.07.029

Trail, G.T, & James, J. (2001). An analysis of the sport fan motivation scale. *Journal of Sport Behavior, 24*(1), 108-128.

Trail, G. T., Robinson, M. J., & Kim, Y. K. (2008). Sport consumer behavior: A test for group differences on structural constraints. *Sport Marketing Quarterly, 17*(4), 190-200.

Wann, D. L., Grieve, F. G., Zapalac, R. K., & Pease, D. G. (2008). Motivational Profiles of Sport Fans of Different Sports. *Sport Marketing Quarterly*, *17*(1), 6-19.

Wiid, J. A., & Cant, M. C. (2015). Sport fan motivation: Are you going to the game?. *International Journal of Academic Research in Business and Social Sciences*, *5*(1), 383-398.

Wiid, J. A., & Cant, M. C. (2015). Sport Fan Motivation: Are You Going To The Game? *International Journal of Academic Research in Business and Social Sciences, 5*(1), 383.

Williams, J. F. (2006). Coming Revenue Revolution in Sports. *Willamette Law Review, 42*(4), 669-708.

Won, J. U., & Kitamura, K. (2006). Motivational factors affecting sports consumption behavior of K-league and J-league spectators. *International Journal of Sport and Health Science, 4*(1), 233-251.

Yaghoobi, S., Hamidfar, M., Lawson, D. M., Fridlund, B., Myles, P. S., & Pakpour, A. H. (2015). Validity and reliability of the Iranian version of the quality of recovery-40 questionnaire. *Anesthesiology and pain medicine*, *5*(2), 1-8. doi: 10.5812/ aapm.20350

Zhang, J. J., Pease, D. G., Hui, S. C., & Michaud, T. J. (1995). Variables affecting the spectator decision to attend NBA games. *Sport Marketing Quarterly*, *4(4)*, 29-40.

Consumers' Demographic Factors Influencing Perceived Service Quality in e-Shopping: Some Evidence from Nigerian Online Shopping

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ABSTRACT

The literature has consistently demonstrated that consumers' perception of online stores' service quality is influenced by several factors such as technology use skills, knowledge, income, gender, age, and marital status. This study seeks to determine the differences of perceived service quality (PSQ) in online shopping based on consumers' six demographic factors: age, gender, monthly income (MI), occupation, educational qualification (EQ) and marital status (MS) within four dimensions: access, reliability, ease of use and attentiveness (EoU&A), and Security and Credibility (S&C) adopted from SERVIQUAL scale with modifications. Using snowball method and an online questionnaire, 400 participants comprising students, public servants and private organisations' employees drawn from three Nigerian cities: Abuja, Kano, and Lagos were surveyed. The hypotheses were tested using the scale. Factor analysis yielded the above-mentioned dimensions. Kruskal-Wallis (H test), Mann-Whitney test and Post Hoc test were used to determine the difference of PSQ in online shopping based on the six demographic factors involving each of those dimensions. The results indicate a significant difference of PSQ in age, educational qualification and occupation consistently exists within S&C dimension and variously within the rest of the dimensions. However, no significant difference of PSQ in MI was found in all the four dimensions. Furthermore, gender and MS indicate a significant difference

of PSQ within access and EoU&A; only difference based on gender is significant within reliability; while both differences based on gender and MS are not significant within S&C dimension.

INTRODUCTION

A diverse population of consumers with heterogeneous demographic backgrounds, such as age, gender, education, income, marital status, and occupation perceive the quality of services rendered by online retailers (e-tailers) with varying degrees of difference. So is the case among Nigerian consumers (Ibrahim, Hassan, & Yusuf, 2018). Available data indicate that many Nigerian consumers perceive the quality of services rendered by online stores favourably (Ibrahim, Hassan, Usman-Buni, & Dahiru, 2015). However, the literature further suggests an undulating pattern of the consumers' perceived service quality (PSQ), which according to the literature, is affected by the consumers' demographic characteristics (Chukwu & Uzoma, 2014; Falode, Amubode, Adegunwa, & Ogunduyile, 2016). Demographic characteristics are considered as critical issues for the development of e-shopping (Chen & Macredie, 2010). Hence, the urge for empirical investigations to be conducted to determine the influence of demographic characteristics on consumers' PSQ. This paper believes a clear understanding of the effects of these demographic characteristics

would give e-tailers the opportunity to develop tailored strategies for improving sales.

Consumers' PSQ is the key construct and fundamental factor in online retail transactions (Wu, Chen, Chen, & Cheng, 2014). Consumers' PSQ is also seen as a critical factor influencing consumers' purchase behaviour in e-shopping contexts (Chiu, Wang, Fang, & Huang, 2014). It is also believed to be a critical factor in enhancing online retail outlet's reach and operational efficiency (Logan, 2014). Consumers' service quality expectations provide online retail firms the opportunity to overcome the limitations of size, consumer reach and compete more effectively with large, conventional (offline) retail firms (Kaplan & Haenlein, 2010; Kietzmann, Hermkerns, McCarthy, & Silvestre, 2011). Therefore, it is crucial to determine the factors influencing consumers' perception of quality in service delivery and products purchase contexts. Wu et al. (2014) had shown that there was a relationship between PSQ and consumers' human factors (demographic characteristics) such as age, gender, and so on. Female and male consumers may have different products and services need structures and models when shopping online. They may react to the same quality differently, thus resulting in differences in their expected services and products quality, which, according to Fang, Wen, George and Prybutok (2016), and Wu et al. (2014) can result in different intention.

Regarding the relationship between demographic characteristic factors and consumers' preference of online shopping,

many previous studies have determined that demographic characteristic factors can affect consumers' online information search behaviour (Kalia, Singh, & Kaur, 2016; Zhou, Jin, & Fan, 2014) and consumers' e-shopping preferences (Lian & Yen, 2014; Phang, Kankanhalli, Ramakrishnan, & Raman, 2010). Human characteristics can also affect evaluation of online shopping products and services quality (Barrera, Garcia, & Moreno, 2014; Yoon & Occena, 2015). Similarly, the literature has documented that individual consumers perceive service delivery and products quality differently (Ganesan-Lim, Russell-Bennett, & Dagger, 2008). Hence, it is argued that products and services quality perception may vary across segments of consumers (Barrera et al., 2014; Ganesan-Lim et al., 2008).

Moreover, consumers' perception is a critical factor that drives online retailing, perception of the products and services quality has been found to differ significantly between different customers (Sanchez-Perez, Sanchez-Pernandez, Marin-Carrillo, & Gazquez-Abad, 2007; Yoon & Occena, 2015). It also leads to a difference in customer satisfaction and future behaviour (Kalia et al., 2016; Lian & Yen, 2014).

Furthermore, over the recent decades, more and more retailers have realised the potential of online shopping to increase sales and service quality (Doostar, Akbari, & Abasi, 2013). With the increasing expansion of online retailing and shifts in consumers' attitudes and behaviour, both domestic and international retailers rush to improve

their online marketing strategies to be more effective and evolving new ones so that they can expand their online business and maximize profits (Chukwu & Uzoma, 2014).

This study contributes to the online retail literature in two perspectives. First, given that the systematic understanding of the influence of demographic characteristics on PSQ in an online commerce context is not established (Chukwu & Uzoma, 2014; Folade et al., 2016), it is theoretically meaningful to investigate this issue in an online retailing context. Second, this study determines the potential limitation (boundary) conditions of the influence of age, gender, education, income, marital status, and occupation by investigating their link with shopping motives. Therefore, this research study provides a more comprehensive understanding of the effects of demographic characteristics on PSQ in an online retailing context.

Online shopping is more likely to be accepted in an environment with a good Internet penetration rate. Internet penetration in Nigeria is progressively spreading, particularly with the proliferation of mobile phone data and fixed wireless access (FWA) services. According to the Nigerian Communications Commission (NCC), by February 2015, there were over 83 million mobile Internet active subscriptions on global system mobile telecommunication (GSM) networks. NCC is the sector regulator in the country. The ICT market in Nigeria has expanded considerably over the past decades, with

the number of licensed Internet service providers (ISPs) rising from 18 in 2000 to 189 by the end of March 2015 according to Freedom on the Net Report (FOTN).

Internet penetration in Nigeria is progressively spreading, particularly with the proliferation of mobile phone data and FWA services. According to the Nigerian Communications Commission (NCC), by February 2015 there were over 83 million active mobile Internet subscriptions on global system mobile telecommunication (GSM) networks. As cited in Internet World Stats (IWS) (2017), according to NCC, Nigeria has a population of about 192 million, out of which 92 are Internet users (which is 47.9% of the population by December 2016). According to Freedom on the Net Report (FOTN) the information and communication technology (ICT) market in Nigeria has expanded considerably over the past decades, with the number of licensed Internet service providers (ISPs) rising from 18 in 2000 to 189 as by the end of March 2015 (FOTN, 2015; Reuters, 2015).

There are also 11 fixed-wired access (FWA) providers and four GSM mobile phone operators that provide Internet access to millions of subscribers. Nevertheless, the growth of ISPs and FWA services sector has slowed in recent years with the rise in mobile access. By February 2015, the four privately owned GSM companies namely, MTN, Globacom, Airtel, and Etisalat had combined total subscribers of over 136 million (FOTN, 2015).

With 16 million active Facebook users by June 2016 and an Internet penetration rate of 8.3%, the country has the largest population of Internet and Facebook users in Africa (Reuters, 2015). According to statistics, Internet coverage in Nigeria was 43% and 38% in 2014 and 2013, respectively. In 2013, 78% of Nigerians had access to mobile phone services, while it was 73% in 2013. By contrast, the NCC reported a mobile phone tele density of 102% in February 2015. Nigeria has 120 active Facebook users by the end of June 2015 (FOTN, 2015). Citing Facebook.com, Emmanuel (2015) stated that more than 7.1 million Nigerians access Facebook daily, making the country Africa's biggest user of social media platform, and that Twitter had opened its doors to Nigerian advertisers.

This study was performed to determine the difference-based consumers' demographic characteristics (age, gender, educational qualification, marital status, monthly income, and occupation) of perceived service quality (PSQ) in online shopping involving access to online services, ease of use of online shopping and attentiveness, reliability of online services, security of online transaction environment, and credibility of products information contexts. These dimensions were adopted with minor modifications from the service quality (SERVQUAL) model proposed by Parasuraman, Zeithamal and Malhotra (2005), Parasuraman, Zeithaml and Berry (1988, 1986, 1985). This paper discusses

research background, reviewed relevant literature, followed by research method and materials, results and discussion and wraps up with conclusion, implications, and recommendations.

LITERATURE REVIEW

E-Shopping and Perceived Service Quality: Concept and Practice

Over the past decades, research in online shopping has mainly focused on seeking to understand consumer behaviour better, identification of online consumer characteristics and the examination of cross channel shopping behaviour (Rowley, 2009). A research study conducted by Goldsmith and Flynn (2004) on the psychological and behavioural drivers of e-shopping suggested that being male or female adventurous online consumer and a heavy catalogue shopper had the most impact on PSQ. However, a study conducted by Kim and Kim (2004) found that transaction/cost factor and incentive scheme factor were important predictors of PSQ in e-shopping.

Online shopping has many connotations, which are used interchangeably. These connotations are Internet shopping, electronic shopping, e-shopping, and web shopping (Aminu, 2013). Birkin, Clarke and Clarke (2002) defined online shopping as a single, homogenous activity, the selling of goods and services via the World Wide Web (www). While Monsuwe´, Dellaert and Ruyter (2004) defined e-shopping as the usage of online stores by consumers up until the transactional stage of purchasing and logistics. Web shopping is an e-commerce

system used by shoppers in the context of business-to-consumer (B2C) or business-to-business (B2B) (Ling, Chai, & Piew, 2010). This clearly indicates that online shopping requires existence of retailers' websites through which shopping is done in a virtual environment devoid of physical contact between sellers and buyers (Aminu, 2013; Ling et al., 2010). However, to attract and retain consumers, online retail stores must design and promote user-friendly websites. In addition, they must ensure that the consumers get values for their money, especially for medium and large online stores since ultimately the main goal of online shopping is to provide a platform for consumers to make exchange of goods and services with retailers via the Internet (Aminu, 2013).

Previous studies have shown that certain types (qualities) of goods are suitable for online shopping. According to Kim and Stoel (2004), the suitability of the Internet to marketing products or services depends on the products or services characteristics (qualities). There are two categories of these products. The first category consists of goods that ranged from computers to canned goods, and can be evaluated online by using text, pictures, and other digital communication formats. The second category consists of products that are referred to as experience products, which consumers prefer to see and touch before purchasing. It includes clothes and groceries (Aminu, 2013; Kalia et al., 2016).

Given that the relationships have been found between consumers' demographic

characteristics and PSQ (Salmeron & Hurtado, 2006), online stores adopt many strategic objectives to improve online service quality. An extensive content analysis of 780 United Kingdom (UK) online stores' websites was conducted to investigate consumer characteristics and establish the relationship between levels of online involvement and product type. The study suggested that the consumers predominately conduct online shopping based on the quality of services rendered by the online stores (Marchiniak & Bruce, 2004).

Consumer behaviour has been identified as a component of e-shopping (Cowart & Goldsmith, 2007). The literature suggests there are three ways to characterize the styles of consumer behaviour, these are psychographic/lifestyle approach (Lastovicka, 1982), the consumer typology approach (Moschis, 1976), and the consumer demographic characteristics approach (Westbrook & Black, 1985). Other previous studies have also identified key consumer decision-making characteristics, which range from rational shopping and quality consciousness to impulsiveness and information overload (Maynes, 1976) as part of e-shopping dimension. Sproles (1985) used findings from previous authors as a validated measure of nine basic consumer decision-making characteristics on PSQ, each of which independently represented an important mental approach to consumption. The nine characteristics are: (1) perfectionism, high-quality consciousness; (2) brand consciousness; (3) novelty-apparel consciousness; (4) hedonistic, recreational shopping consciousness; (5) "value for money" shopping consciousness; (6) impulsiveness; (7) confusion from over choice; (8) demographic characteristics; and (9) habitual, brand-loyal orientation (Cowart & Goldsmith, 2007).

Furthermore, seven motivations and determinants for online shopping service quality have been identified, namely social escapism, transaction security and privacy, information, interactive control, socialisation, non-transactional privacy, and economic motivation. These factors have been found to be correlated to consumers' demographic attributes (Korgaonkar & Wolin, 1999). Other studies used previous online purchases as a measure of the dependent variable, while transaction-based security concerns, interactive control, conversation motives, demographic characteristics, and economic motives were deemed significant predictors of PSQ. The findings of the study suggested that once people are online, when they buy products, how much money they spend and why they make purchases are direct consequences of their Internet proficiency, time availability, and demographic attributes (Cowart & Goldsmith, 2007).

Some empirical evidences have shown that product familiarity and knowledge may influence consumers' engagement with the online market and perception of service quality (Rowley, 2009). Many previous studies have found that familiarity with products offered online and previous e-shopping experience,

influence consumers' perceptions of the risk associated with e-shopping, service quality and intentions to purchase online (Park & Stoel, 2005; Siddiqui, O'Malley, McColl, & Birtwistle, 2003). Furthermore, an online store's website design and information clarity affects consumers' PSQ (Siddiqui et al., 2003). Merrilees and Miller (2005) supported those findings in a research study they performed in Australia in the context of online department stores. The researchers conclude that e-shopping is mainly a functional activity with considerable roles for interactivity, web atmospherics/virtuality and navigability, underscoring that perception of the quality of services rendered by those e-stores are rooted in emotional product attributes such as excitement or authenticity and consumers' demographics such as age, gender, and income (Rowley, 2009).

Positive attitudes toward e-shopping perceptions that it is fun, safe, cheap and easy were shown to be linked with buying products online. In addition, these attitudes were found to be correlated with the consumers' demographic attributes (Goldsmith & Bridges, 2000). An empirical investigation into the consumer decision-making styles of college students in the United States (US) on e-shopping suggested that consumers were hedonistic shoppers, price conscious, quality conscious, responsiveness conscious, reliability conscious, impulsive, and brand loyal (Cowart & Goldsmith, 2007). However, it is important to note that not all consumer groups are the same. Kim and Kim (2004)

suggested that consumers' demographic variables such as gender, age, income, and number of children were critical predictors of online shopping intention.

Effects of Demographic Attributes on Perceived Service Quality in e-Shopping

Effect of Age. A research study performed on electronic (online) banking or e-banking by Kumbhar (2011) found that PSQ, perceived value from e-banking services, and overall satisfaction in banking differ by customers' age group. Ganesan-Lim et al. (2008) found that consumer age affects service quality perceptions. Barrera et al. (2014) discovered that consumers younger than 24 years perceived a better service quality than those older than 24 years. The findings of a study was conducted by Chang and Samuel (2006) found that the age of online shoppers who was motivated to purchase products online vary – that middle-aged consumers (24 to 44 years old) tend to be primarily influenced to purchase online for the reason of convenience relative to price and product selection. Similarly, Vrechopoulos, Siomkos and Doukidis (2001) discovered that online shoppers' age fall within 24 to 44 years old age group. A study on website satisfaction suggested that the observed difference in overall website satisfaction across age groups supported the notion that on average, younger Internet users were more satisfied with websites (Pretorios, 2010).

Contrarily, however, Kalia et al. (2016) found that most online shoppers were young, and fall within the age group of 21 to 30 years old. Min and Khoon (2013) discovered

that age factor did not make any significant difference in the critical elements of service quality evaluation. In addition, age does not moderate the relationship among usefulness, enjoyment, external characteristics, and reliability (Doostar et al., 2013).

Effect of Educational Qualification. Quite many previous research studies have linked consumers' online purchase behaviour, particularly products and services quality perception to the consumers' educational background. A study conducted by Kalia et al. (2016) found that online product purchasers were well educated, open-minded, cosmopolitan, less-resistant to change, self-confident, and venturesome. Vrechopoulos et al. (2001) identified e-shoppers as mostly university undergraduates and postgraduates, while Min and Khoon (2013) empirically determined that individual online users' educational qualification influences his or her services quality perceptions. Similarly, Kumbhar (2011) empirically discovered that there is a difference in level of education between perceived services quality, perceived value from e-banking services, and overall satisfaction in e-banking.

On the contrary, however, a study has linked consumers without a university degree qualification to having favourable perception of quality services than consumers with a university degree do (Berrera et al., 2014). Ilias, Hassan and Rahman (2009) found that there is no difference in students' satisfaction toward service quality determinants and overall service quality based on students' semester of study. While, Phang, Kankanhalli, Ramakrishnan and Rama (2010) discovered that there was no significant difference between online consumers adopting a search/deliberation strategy and those adopting a hedonic browsing strategy with different education groups.

Effect of Gender. Gender has been identified as one of the critical demographical factors that determine individuals' online perceptions and behaviours (Venkatesh, Morris, Davis, & Davis, 2003) and is influential in customers' evaluation of service quality (Min & Khoon, 2013). In a research study conducted on online consumers' perception of e-shopping service quality, Kalia et al. (2016) suggested that online consumers tended to be male rather than female, and argued that women are more risk-bearing and engage in highly exploratory behaviour while purchasing online than men do. A study by Pretorios (2010) had linked female consumers with expressing greater overall website satisfaction.

Furthermore, online customers who are motivated to purchase online have been found to vary in gender and that female customers tend to make online purchase for convenience reasons relative to price and product selection (Chang & Samuel, 2006). Barrera et al. (2014) identified women online purchasers as having higher valuation of the service quality of websites than men do. However, Vrechopoulos et al. (2001) found that online shoppers was mostly male contradicts. Doostar et al. (2013) found

that gender moderated the relationship between usefulness, enjoyment, external characteristics, and reliability.

Several other studies did not support the idea that gender influences consumers' service quality perceptions. Ganesan-Lim et al. (2008) discovered that there was no difference in service quality of consumers based on gender. Ilias et al. (2009) also discovered that there was no difference in students' satisfaction of service quality determinants and overall service quality-based gender. Similarly, Kumbhar (2011) empirically found that there was no difference based on gender in perception of service quality, perceived value, and overall satisfaction of e-banking services.

Effect of Income. As one of the key demographic characteristics variable, income was found to influence online consumers' perceptions and behaviours (Sanchez-Perez et al., 2007) like other demographic factors such as age and gender (Venkatesh et al., 2003). The literature documented that Kalia et al. (2016)'s research study was found that the average monthly household disposable income of online purchasers was higher. Vrechopoulos et al. (2001) supported this finding. Chang and Samuel (2006) indicated that middle-income-earning consumers tended to make online purchase on convenience reasons in relation to price and product selection. A study on e-banking discovered that customers' income level differs with PSQ, perceive value and overall satisfaction (Kumbhar, 2011). Phang et al. (2010) found

that the difference within income groups, between e-shoppers' that adopted website search strategy and those that adopted a hedonic browsing strategy.

Effect of Marital Status. Although marital status was one of the key demographic characteristics, it was not widely used in research studies (Vreschopoulos et al., 2001) as age and gender. A few previous research studies have investigated the relationship between marital status and service quality. Kalia et al. (2016) found that marital status was no significant effect on consumers' online service quality perceptions. Doostar et al. (2013) underscored the moderating influence of marital status on the relationship between usefulness, enjoyment, external characteristics, and reliability. Vreschopoulos et al. (2001) discovered that online shoppers were mostly single.

Effect of Occupation. Occupation is one of the critical demographic characteristics that can be used to determine individuals' online perceptions and behaviours (Venkatesh, Xu, & Thong, 2012). Kumbhar (2011) was identified that consumers' PSQ, perceived value, and overall satisfaction in e-banking differ based on the consumers' profession (occupation). Vreschopoulos et al. (2001) underscored that most online shoppers were private employees, scientists, or freelancers. Based on the aforementioned arguments about the direct links between demographic characteristics and PSQ, six hypotheses are formulated as follows.

E-Shopping in Nigeria

In Nigeria, online shopping is gradually becoming popular, especially among the elites, middle-income earners, professionals, technocrats, and students, who often reside in cities and urban areas. Online stores use the Internet to promote their products thereby encouraging online buying behaviour (Ibrahim et al., 2105, 2018). Online stores promote and sell their products on beautifully designed websites, which encourages consumers to do window shopping, locate products, compare prices, make purchase, drop products in e-shopping cart, make payment, and get products delivered at their door steps (Aminu 2013; Chukwu & Uzoma, 2014).

Majority of online shops in Nigeria offer a wide range of assorted products and services online. This is to give their customers the benefits of conveniently selecting and purchasing products from this range of goods on 24-h basis (Ibrahim et al., 2015, 2018). Although Nigerian consumers know little about most of the online stores in the country because many of them hardly promote their websites to attract consumers, with improved Internet infrastructure and penetration in the country, that Nigerians would be aware of and purchase products from the e-tailers (Aminu, 2013; Chukwu & Uzoma, 2014). Some of the most noticeable online retail shops as provided in the 2015 FOTN Report include Konga, Jumia, Tafoo, Glamour, Egole Shopping, and Manna Stores (FOTN, 2015).

Furthermore, findings of a study indicated that once people were online, when they bought and how much they spent were direct consequences of their Internet proficiency and time availability (Cowart & Goldsmith, 2007). Several models (of the buying process) have been developed one key model is the service quality (SERVQUAL) model developed by Parasuraman, Zeithaml and Berry (1985, 1986).

Theoretical Background: Service Quality in e-Shopping

As a marketing strategy, service quality (SERVQUAL) is a concept that has aroused considerable interest in the research literature because of the difficulties in defining and measuring it (Wisniewski, 2001). Service quality has been defined severally. A commonly used definition is the one that defines service quality as the extent to which a service meets customers' needs or expectations (Parasuraman et al., 1985, 1986, 1988, 2005). Service quality is also the difference between customer expectations of service and perceived service. The literature underscores that if expectations are greater than performance, then perceived quality is less than satisfactory; hence, customer dissatisfaction occurs (Parasuraman et al., 1985, 1986, 1988). Measuring service quality allows for comparison between pre- and post-service changes, for the location of quality-related problems and for the establishment of clear standards for service delivery (Lewis & Mitchell, 1990). According to Edvardsen, Tomasson and Ovretveit (1994) and Robinson (1999), analysis and measurement were the starting

point in developing quality in service delivery.

The SERVQUAL instrument has been adjudged the predominant method used to measure consumers' perceptions of service delivery quality and has five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (van Iwaarden, van der Wiele, Ball, & Millen, 2003). Furthermore, the model was later refined by Parasuraman, Zeithamal and Malhotra (2005) and is adopted in the evaluation of electronic (online) service quality or e-SERVQUAL. The researcher defined e-service quality as the extent to which a website facilitates efficient and effective products shopping, purchasing, and delivery service. The e-SERVQUAL model has 11 parameters, namely access, ease of navigation, efficiency, flexibility, personalisation, security/privacy, responsiveness, assurance/trust, site aesthetics, and price knowledge.

Hypotheses of the Study

H[1]: PSQ in e-shopping differs based on consumers' age

H[2]: PSQ in e-shopping differs based on consumers' educational qualification

H[3]: PSQ in e-shopping differs based on consumers' gender

H[4]: PSQ in e-shopping differs based on consumers' income

H[5]: PSQ in e-shopping differs based on consumers' marital status

H[6]: PSQ in e-shopping differs based on consumers' occupation

MATERIALS AND METHODS

Although there is abundant literature on the effect of PSQ on consumers' acceptance of online shopping, there is dearth of studies that empirically investigated the effect of consumers' demographic characteristics on perceived quality among Nigerian online customers. Nigeria is one of the African countries with the highest Internet penetration rates and one of the continent's online market hubs (FOTN, 2015). Therefore, this research study was performed because of the urge to determine the effect of six demographic characteristics (age, education, gender, income, marital status, and occupation) on consumers' PSQ in online shopping.

Development of the Research Instrument

The testing of the hypothesis of the study was performed with a survey instrument that was designed in English language and administered via Internet to 400 online customers of three most popular e-shops in the country that had made at least two online shopping in the past 4 months. An e-mail containing a link to the questionnaire was sent to the respondents in three Nigerian cities, namely Abuja, Kano, and Lagos. Kano and Lagos cities are the commercial hubs of the country, while Abuja city is the country's administrative centre and an excellently growing business centre (Business Directory, 2016; FOTN, 2015).

Sampling Procedure and Respondents' Profile

The data were collected using snowball-sampling method, which was deemed appropriate for this study (since most of the respondents are dispersed) based on the suggestions by Babbie (2010); Malhotra and Birks (2007). Consulting Cochran (1977) sampling technique, which suggested a sample size of 380 respondents, the study rounded it up to 400. Taking from suggestions by Sekaran (2003), 400 cases were considered as a good sample size since the results can be generalised. However, 42 responses were lost during data retrieving, sorting, and cleansing. Because of that, only 358 responses were used for data analysis. This study adopted a 21-item service quality measurement (SERVQUAL) model developed by Parasuraman et al. (1985, 1986, 1988, 2005) with modifications permitted in the literature (Jun, Yang, & Kim, 2004). The 21-item scale was formulated to measure perceived online stores' services.

Of the 400 respondents, more than a half of them were male (50.25%, 201), most of them were single (61.75%, 247), and nearly a half of them (47.5%, 190) were young, aged between 18 and 31 years old. However, not quite many of them were public servants (27.5%, 109) or private organisations' employees (25.5%, 98). Similarly, not quite many of them (37.75%, 151) were students or moderate-income earners (39%, 156) (earning between ₦18,000[1] and 49,000 per month); and even fewer (25%, 100) of them were middle-income earners (earning between ₦50,000 and ₦100,000 per month).

Method of Analysis, Reliability, and Validity of the Scale

The degree of internal consistency of the items in the instrument scored a Cronbach alpha value of $\alpha = 0.928$. Based on the suggestion of Kaiser and Rice (1974), this indicated that the of 21-item scale was reliable. Since the data were voluminous, factor analysis was run. Kaiser-Meyer-Olkin (KMO)'s and Bartlett's Test results showed scores of 0.926 and under 0.001 (significant), which invariably indicates that the data were suitable for factor analysis. Furthermore, a check of the communality scores of the items indicates that all the items scored values greater than the cut-off point, that is, < 0.30.

The analysis yielded four factors, which collectively explained 59.2% of the total variance in PSQ. The predictors/dimensions in the principal components were determined with varimax rotation of factor analysis. In this regard, for cleansing of the items in scale many researchers like Cai and Jun (2003); Francis (2005); Hair, Black, Babin, Anderson and Tatham (2006); Jun et al. (2004), and Long and McMellon (2004) suggested a 0.5 cut-off point for loadings and eliminated items with exploratory factor loadings of < 0.5. Therefore, in this study, all items with exploratory factor loadings of less than 0.5 were eliminated from further analysis. Because of that, 19 items were retained out

of the original number of 21 items in the scale. Based on Malhotra (2004), Kenny, Kaniskan and McCoach (2015); Kenny (2014) and Chong (2013)'s suggestion this confirms that all the retained items are unidimensional and distinct (mutually exclusive) since all of them have a factor loading of > 0.5. In addition, all the items used to operationalize the constructs were loaded onto a single factor.

This process yielded four factors (as mentioned earlier) (Table 1). The factors are access, ease of use and attentiveness (EoU&A), reliability and security and credibility (S&C). The scores of Cronbach

alpha reliability analysis for the four factors extracted were 0.863, 0.841, 0.824, and 0.773, respectively. Concisely, all the Cronbach alpha values mentioned earlier indicate a very good internal consistency (reliability).

Furthermore, the researchers ran Kolmogrov–Smirnov one-sample test and it revealed that the data needed application of non-parametric tests. Therefore, Mann–Whitney U Test and Kruskal–Wallis (H test) were also run (Conover, 1999; Demsar, 2006). For the results of the Post Hoc tests, refer to Appendices A to C.

Table 1
Factor Analysis of the Dimensions of the Scale

Variables	Items	Components				Cronbach alpha	% of vari- ance
		1	2	3	4		
Access						0.863	7.334
	The website identified the street and indicated the e-mail address, telephone and fax numbers of the online shop.	0.229	0.582	7.334	0.105		
	I could easily contact a customer services representative over the telephone if I wanted to.	0.428	0.592	0.278	0.154		
	The online shop's website offered multiple products ordering options such as telephone, mobile phone, e-mail and fax.	0.276	0.720	0.178	0.035		
	If I needed more information about a products and delivery service, I could turn to the online shop's chat room, bulletin board or click on the 'help' icon.	0.104	0.781	0.049	0.345		
	The online shop's website contained a link for customers to send their questions and comments about products and service delivery.	0.257	0.572	0.033	0.466		

Table 1 *(continue)*

Variables	Items	Components				Cronbach alpha	% of variance
		1	2	3	4		
Reliability						0.841	5.588
	The quantity and quality of the products I received were the same as those for which I placed an order.	0.077	0.816	0.732	0.173		
	The products I placed an order for was delivered to me within the time promised by the online shop.	0.267	0.125	0.723	0.183		
	The billing process and the billing records were accurately handled and saved.	0.266	0.200	0.731	0.044		
	The online shop's customer care representative responded to my inquiry promptly.	0.376	0.273	0.518	0.222		
	When the online shop's customer care representative promised to send me an e-mail or call me on the phone by a certain time, he or she did so.	0.175	0.419	0.538	0.246		
Ease of use and attentiveness (EoU&A)						0.824	41.490
	The online shop's web address was easy to remember.	0.580	0.805	41.490	0.095		
	The organisation and structure of the online shop's catalogues were logical and easy to follow.	0.722	0.175	0.378	0.158		
	All the online products retail terms and conditions (e.g., payment, warranty and return policies) of the online shop were easy to read and understand.	0.679	0.209	0.214	0.199		
	The online shop's website content was easy to understand.	0.808	0.186	0.198	0.117		
	I received a personal gratitude note via e-mail or other media after I placed an order.	0.506	0.227	0.168	0.305		

Table 1 *(continue)*

Variables	Items	Components				Cronbach alpha	% of variance
		1	2	3	4		
Security and credibility (S&C)						0.773	4.839
	I felt secure in providing my personal information for online products purchase.	0.417	0.753	4.839	0.567		
	I felt that the risk associated with online shopping was low.	0.269	0.009	0.183	0.678		
	The online shop's website indicated how long the online shop has been in this online business.	0.036	0.344	0.068	0.749		
	I received special rewards and discounts as promised by the online shop for doing business with it.	0.099	0.158	0.278	0.660		

RESULTS AND DISCUSSION

Results

The findings of this study are presented in Tables 2 to 6. The details of the results are discussed extensively in the Discussion sub-section for clarity and easier understanding of the main gist of the research.

The findings show significant difference of PSQ in e-shopping based on consumers' age and educational qualification within access dimension, with the following p-values $p = 0.001$ and $p = 0.021$, respectively. However, the results show no significant difference of PSQ in e-shopping based on income and occupation within this dimension (Table 2).

There was a significant difference of PSQ in online shopping based on consumers' educational qualification and occupation within Reliability dimension (with these significance values, $p = 0.017$ and $p = 0.039$ respectively). However, there was no any significant difference of PSQ in online shopping based consumers' age and income within this dimension (Table 3).

There was a significant difference of PSQ in e-shopping based on consumers' age and educational qualification within EoU&A dimension (with these significance values, $p = 0.005$ and $p = 0.044$ respectively). However, based on the consumers' income and occupation no significant difference of PSQ in online shopping was found in this dimension as shown in Table 4.

There was a significant difference of PSQ in e-shopping based on consumers' age, educational qualification, and marital

Table 2

Results of difference of PSQ in online shopping within Age, EQ, MI and Occupation Involving Access Dimension (n = 358)

Access Dimension						
Demographic Characteristics				Statistics		
		F	Mean	χ^2	Df	*p* Value
Age	18 to 24 years old	132	158.34			
	25 to 31 years old	58	158.65			
	32 to 38 years old	59	149.58	7.066	2	0.001*
	39 to 45 years old	71	146.42			
	$>$ 45 years old	38	150.34			
Educational Qualification	Postgraduate	47	153.43			
	Undergraduate	79	150.73			
	Higher National Diploma (HND)	67	150.46	7.335	2	0.021*
	National Diploma (ND)/National Certificate of Education (NCE)	80	156.29			
	Secondary School/College	85	178.43			
Monthly Income	₦18,001 to ₦49,000	156	156.51			
	₦50,000 to ₦100,000	100	160.34	.856	4	0.831
	₦100,001 to ₦150,000	77	151.55			
	$>$ ₦150,000	25	192.82			
Occupation	Civil (Public) Service	109	145.92			
	Private/Corporate Service	98	168.38	0.188	5	0.567
	Students	151	138.90			

*Significant at 0.05; *p* Value = Significance value; ₦ = Naira (symbol of Nigerian unit of currency), F = Frequency; Df = Degree of freedom

Table 3

Results of difference of PSQ in online shopping within age, EQ, MI and occupation involving reliability dimension (n = 358)

Reliability Dimension						
Demographic Characteristics				Statistics		
		F	Mean	χ^2	Df	*p* Value
Age	18 to 24 years old	132	151.47			
	25 to 31 years old	58	157.65			
	32 to 38 years old	59	164.03	1.588	3	.557
	39 to 45 years old	71	130.33			
	$>$45 years old	38	178.14			

Table 3 *(continue)*

Reliability Dimension						
Demographic Characteristics		Statistics				
		F	Mean	χ^2	Df	*p* Value
Educational Qualification	Postgraduate	47	161.59			
	Undergraduate	79	168.63			
	Higher National Diploma (HND)	67	152.32	7.124	2	.017*
	National Diploma (ND)/National Certificate of Education (NCE)	80	146.04			
	Secondary School/College	85	148.04			
Monthly Income	₦18,001 to ₦ 49,000	156	135.14			
	₦50,001 to ₦ 100,000	100	158.85	6.250	4	0.183
	₦100,001 to ₦ 150,000	77	174.43			
	>₦150,000	25	172.38			
Occupation	Civil (Public) Service	109	164.82			
	Private/Corporate Service	98	154.68	9.104	2	0.039*
	Students	151	151.50			

p Value = Significance value (significant at 0.05); ₦ = Naira (symbol of Nigerian unit of currency), F = Frequency; Df = Degree of freedom

Table 4
Results of difference of PSQ in online shopping within age, EQ, MI and occupation involving EoU&A dimension (n = 358)

Ease of Use and Attentiveness Dimension						
Demographic Characteristics		Statistics				
		F	Mean	χ^2	Df	*p* Value
Age	18 to 24 years old	132	165.76			
	25 to 31 years old	58	153.61			
	32 to 38 years old	59	154.60	7.321	2	0.005*
	39 to 45 years old	71	146.45			
	>45 years old	38	151.91			
Educational Qualification	Postgraduate	47	156.12			
	Undergraduate	79	166.42			
	Higher National Diploma (HND)	67	135.13	8.393	2	0.044*
	National Diploma (ND)/National Certificate of Education (NCE)	80	152.53			
	Secondary School/College	85	156.03			

Table 4 *(continue)*

Ease of Use and Attentiveness Dimension						
Demographic Characteristics				Statistics		
		F	Mean	χ^2	Df	*p* Value
Monthly Income	₦ 18,001 to ₦ 49,000	156	170.62			
	₦ 50,001 to ₦ 100,000	100	170.14			
	₦ 100,001 to ₦ 150,000	77	145.55	3.173	4	0.783
	>₦150,000	25	182.63			
Occupation	Civil (Public) Service	109	182.63			
	Private/Corporate Service	98	152.68	5.179	2	0.635
	Students	151	150.09			

*Significant at 0.05; *p* Value = Significance value; ₦ = Naira (symbol of Nigerian unit of currency), F = Frequency; Df = Degree of freedom

status within S&C dimension. However, no significant difference of PSQ in e-shopping based on consumers' monthly income was found within this dimension as shown in Table 5.

Table 5
Results of difference of PSQ in online shopping within age, EQ, MI and occupation involving S&C dimension (n = 358)

Security and Credibility						
Demographic Characteristics				Statistics		
		F	Mean	χ^2	Df	*p* Value
Age	18 to 24 years old	132	165.83			
	25 to 31 years old	58	150.04			
	32 to 38 years old	59	160.93	6.095	2	0.044*
	39 to 45 years old	71	140.29			
	>45 years old	38	152.36			
Educational Qualification	Postgraduate	47	162.11			
	Undergraduate	79	154.97			
	Higher National Diploma (HND)	67	97.08	8.323	2	0.037*
	National Diploma (ND)/National Certificate of Education (NCE)	80	148.84			
	Secondary School/College	85	151.93			

Table 5 *(continue)*

Security and Credibility						
Demographic Characteristics		Statistics				
		F	Mean	χ^2	Df	*p* Value
Monthly Income	₦ 18,001 to ₦ 49,000	156	121.91			
	₦ 50,001 to ₦ 100,000	100	129.71	3.583	4	0.543
	₦ 100,001 to ₦ 150,000	77	137.65			
	>₦150,000	25	116.71			
Occupation	Civil (Public) Service	109	169.09			
	Private/Corporate Service	98	173.98	7.247	2	0.025*
	Students	151	159.51			

*Significant at 0.05; *p* Value = Significance value; ₦ = Naira (symbol of Nigerian unit of currency), F = Frequency; Df = Degree of freedom

A significant difference of PSQ in online shopping exists in consumers' gender and marital status categories within all the four dimensions as follows. In access dimension, a significant difference of PSQ in e-shopping exists within consumers' gender and marital status categories; in reliability dimension, a significant difference of PSQ in online shopping exists within only gender categories; in EoU&A, a significant difference of PSQ in e-shopping exists within both gender and marital status; in S&C dimension, no significant difference of PSQ in online shopping was discovered within either of gender or marital status as shown in Table 6.

Table 6
Results of difference of PSQ in online shopping within gender and marital status categories involving each of the four dimensions of the scale (n = 358)

The Dimensions of the Scale	Statistics	Gender		Marital Status	
		Male	Female	Married	Single
Access	*N*	201	157	111	247
	Mean Status	155.15	153.73	147.35	156.68
	Sum of Statuses	26064.50	21521.50	10609.50	36976.50
	Mann-Whitney U	11651.500		7981.500	
	Wilcoxon W	21521.500		10609.500	
	Z	-0.140		-0.782	
	Asymp. Sig. (2-tailed)	0.033*		0.041*	

Table 6 *(continue)*

The Dimensions of the Scale	Statistics	Gender		Marital Status	
		Male	Female	Married	Single
Access	*N*	201	157	111	247
	Mean Status	155.15	153.73	147.35	156.68
	Sum of Statuses	26064.50	21521.50	10609.50	36976.50
	Mann-Whitney U	11651.500		7981.500	
	Wilcoxon W	21521.500		10609.500	
	Z	-0.140		-0.782	
	Asymp. Sig. (2-tailed)	0.033*		0.041*	
Reliability	N	201	157	111	247
	Mean	157.71	150.65	163.22	151.84
	Sum of Statuses	26495.50	21090.50	11751.50	35834.50
	Mann-Whitney U	11220.500		7868.500	
	Wilcoxon W	21090.500		35834.500	
	Z	-0.698		-0.954	
	Asymp. Sig. (2-ailed)	0.001*		0.340	
EoU&A	N	201	157	111	247
	Mean Status	156.34	152.29	149.27	156.10
	Sum of Statuses	26265.50	21320.50	10747.50	36838.50
	Mann-Whitney U	11450.500		8119.500	
	Wilcoxon W	21320.500		10747.500	
	Z	-0.401		-0.574	
	Asymp. Sig. (2-ailed)	0.001*		0.050*	
S&C	N	201	157	111	247
	Mean Status	157.53	150.86	155.13	154.31
	Sum of Statuses	26465.50	21120.50	11169.00	36417.00
	Mann-Whitney U	11250.500		8451.000	
	Wilcoxon W	21120.500		36417.000	
	Z	-0.660		-0.069	
	Asymp. Sig. (2-ailed)	0.509		0.945	

*Significant at 0.05; *N* = Frequency

Post Hoc Test Results

Tables 7 to 9 show the results of the Post Hoc with Kruskal–Wallis (*H* test) analysis for the various categories of the demographic characteristics.

There was a significant difference of PSQ in e-shopping within occupational categories: Private/Corporate service employees and Civil (Public) Service employees involving Reliability and S&C dimensions (with these significance

values, $p = 0.005$, $p = 0.005$, respectively), and between Private/Corporate service employees and Students involving S&C dimension ($p = 0.013$). However, there was no significant difference of PSQ in e-shopping between Private/Corporate service employees and Students within Reliability dimension as well as between Civil (Public) service employees and Students within Reliability and S&C dimensions as shown in Table 7.

In age category, within Access, EoU&A and S&C dimensions no significant difference of PSQ in online shopping within age categories: between two groups of youth (18–24 and 25–32-years old) and between middle-aged (32–38 years) and advanced aged (39–45-year old) was found except for within the latter age categories involving

EoU&A dimension ($p = 0.012$). However, significant difference of PSQ in online shopping exists between advance aged ($>$ 45-year old) and youth (18–24-year old) involving EoU&A ($p = 0.003$) and S&C ($p = 0.019$) dimensions as shown in Table 8.

In educational qualification (EQ) categories, within EoU&A, Reliability and S&C dimensions there was no significant difference of PSQ in e-shopping within educational qualification categories: between postgraduate and undergraduate students was found except for within access dimension ($p = 0.001$). Similarly, no significant difference of PSQ in online shopping exists between HND and ND/NCE within access ($p = 0.004$), reliability ($p = 0.016$), and EoU&A ($p = 0.019$) dimensions except within S&C (Table 9).

Table 7
Results of post hoc analysis for difference of PSQ in e-Shopping within occupational categories involving reliability and S&C dimensions

Occupation	Reliability					Security and Credibility				
	F	Mean Rank	χ^2	Df	p Value	F	Mean Rank	χ^2	Df	p Value
PS/COS ↔CS	28	128.29				28	128.29			
	173	96.58	7.262	1	0.005*	173	96.58	7.288	1	0.005*
PS/COS↔STU	28	79.04				28	82.93			
	107	65.11	2.840	1	0.082	107	64.09	5.231	1	0.013*
CS↔STU	173	136.34				173	138.78			
	107	147.22	1.207	1	0.384	107	143.28	.208	1	0.726

*Significant at 0.05; p Value = Significance value; F = Frequency; Df = Degree of freedom; PS = Private Service; COS = Corporate Service; CS = Civil Service; STU = Students; ↔ = Correlation

Table 8

Results of post hoc analysis for difference of PSQ in e-shopping within age categories involving all the four dimensions

Age Category (in years)	The Dimensions of the Scale														
	Access					EoU&A					S&C				
	F	Mean Rank	χ^2	Df	p Value	F	Mean Rank	χ^2	Df	p Value	F	Mean Rank	χ^2	Df	p Value
18–24↔	132	165.73	427.81	3	0.676	132	159.83	701.11	5	0.889	132	165.53	421.22	4	0.721
25–31	58	150.74	564.35			58	160.04	814.21			58	150.60	332.18		
32–38↔	59	160.73	321.22	5	0.921	59	160.93	895.23	1	0.012*	59	159.93	235.71	4	0.555
39–45	71	160.29	392.10			71	157.29	755.35			71	160.26	456.96		
>45↔	38	162.36	756.96	1	0.016*	38	155.36	701.11	1	0.003*	38	169.76	281.09	1	0.019*
18–24	132	169.23	781.09			132	158.73	814.21			132	162.43	427.81		

*Significant at 0.05; p Value = Significance value; F = Frequency; Df = Degree of freedom; ↔ = Correlation

Table 9

Results of post hoc analysis for difference in PSQ in e-shopping within educational qualification categories involving all the four dimensions

Educational Qualification	The Dimensions of the Scale																			
	Access					Reliability					EoU&A					S&C				
	F	Mean Rank	χ^2	Df	p Value	F	Mean Rank	χ^2	Df	p Value	F	Mean Rank	χ^2	Df	p Value	F	Mean Rank	χ^2	Df	p Value
PG↔UG	47	175.74	727.25	1	0.001*	47	123.83	201.11	5	0.889	47	165.53	421.22	4	0.721	47	145.53	441.20	4	0.721
	79	160.74	764.12	1		79	160.04	514.21			79	150.60	332.18			79	120.30	132.11		
HND↔ND/	67	160.73	321.22	3	0.322	67	110.73	195.23	3	0.199	67	159.93	235.71	4	0.555	67	165.93	725.71	1	0.005*
NCE	80	160.29	392.10			80	157.29	455.35			80	160.26	456.96			80	160.06	856.06		
SS/COL↔UG	85	162.36	856.96	1	0.004*	85	155.36	701.11	1	0.016*	85	167.77	281.09	1	0.019*	85	229.66	281.09	5	0.555
	47	169.23	781.09			47	158.73	814.21			47	169.23	427.81			47	102.43	127.11		

*Significant at 0.05; p Value = Significance value; F = Frequency; Df = Degree of freedom; PG = Postgraduate; UG = Undergraduate; HND = Higher National Diploma; ND = National Diploma; NCE = National Certificate of Education; SS = Secondary School; COL = College; ↔ = Correlation

DISCUSSION

In the following paragraphs, the details of the findings of this research study are discussed extensively and synthesised with existing literature to provide empirical support to the findings.

A study was performed to determine the difference based on consumers' demographic characteristics (age, gender, educational qualification, marital status, monthly income, and occupation) of PSQ in online shopping involving access to online services, ease of use of online shopping and attentiveness, reliability of online service, security of online transaction environment and credibility of products information contexts. The difference of PSQ in online shopping based on the consumers' six important demographic factors was determined both between and within the various demographic factors' categories involving four dimensions (contexts), namely, access, reliability, ease of use and attentiveness (EoU&A), and security and credibility (S&C). The findings are discussed in the following paragraphs.

Conciselys, the results generally show that a significant difference of PSQ in e-shopping within five of the demographic factors namely age, gender, educational qualification, occupation, and marital status was found except for monthly income, which shows no significant difference of in online shopping involving all the four dimensions (access, reliability, EoU&A, and S&C). Hence, hypotheses H^1, H^2, H^3, H^5 and H^6 were accepted, while H^4 was rejected.

Kruskal–Wallis (H test) test (refer to Appendix A) was run to determine the difference in PSQ in online shopping within consumers' age involving Access, EoU&A and S&C dimensions. The finding indicates that a significant difference of PSQ in e-shopping within consumers' age exists involving Access (with a significance value, H (2) = 7.066, p = 0.001) (Table 2), EoU&A (with a significance value, H (2) = 7.321, p = 0.005) (refer to Table 4), and S&C (with a significance value, H (2) = 6.095, p = 0.044) (Table 5). These results clearly show that the data provide statistically significant evidence of the presence of a significant difference of PSQ in online shopping within age categories. Thus, H^1 was accepted.

The significant difference of PSQ within age involving accessing e-shopping services suggests that consumers' age is an important factor that online retail stores should consider when directing product promotion to target customers. The results of the Post Hoc test (Table 9) further indicate a significant difference of PSQ in e-shopping exists between the youngest age group, or the youth (18–24 years old) and the oldest age group, or the advance aged (> 45 years old) pair. As far as age disparity is concerned in relation to PSQ in e-shopping, young Nigerian consumers perceive online shopping service quality differently from older customers. This finding has a very interesting and positive implication on the future of e-shopping in the country, signaling a very bright and auspicious future for online shopping and retailing

especially with the improving Internet coverage, penetration rate and exponentially increasing Internet users (Statista, 2017). This is simply because Nigeria's population has a high percentage of young people as shown in the following population age profile: 0–14 years old: 42.79% (male 40,744,956/female 38,870,303); 15–24 years old: 19.48% (male 18,514,466/female 17,729,351); 25–54 years old: 30.65% (male 29,259,621/female 27,768,368) (Josephson, 2017; CIA World Fact Book, 2017). Therefore, online retailers should prudently manage the resourcefulness of all their customers, especially the youthful, or younger ones. In many previous studies, these groups of consumers form most online stores' patronisers (Ibrahim et al., 2018; Izogo, Nnaemeka, Onuoha & Ezema, 2012; Zhou, Dai, & Zhang, 2007).

Furthermore, a significant difference of PSQ in e-shopping within age categories involving EoU&A dimension was found, which indicates the importance of consumers' perceived benefits, perceived ease of use, and perceived motivation (Venkatesh et al., 2003, 2012) in the use of online retail sites and commercial services. The results of the Post Hoc test indicate a significant difference of PSQ in online shopping exists between the two middle-age group's pair (32–38 and 39–45 years old) as well as the advance aged and the youth age group's pair (> 45 and 18–24 years old). This result suggests that technology-use skills, prior experience, and cognitive motivation in relation to the use of online shopping are the driving factors determining the difference in the influence of age categories on PSQ in e-shopping. Somehow supporting these findings, previous literature suggests that younger online consumers possess higher use skills and deeper use experience (Venkatesh et al., 2012; Yoon & Occena, 2015).

Similarly, a significant difference of PSQ in e-shopping exists within the age categories between the oldest, the youth and the advance aged groups' pair (> 45 and 18–24 years old) involving S&C dimension. Hence, young consumers may have a more positive perception of online retail stores' service and product information quality and secure online transaction environment very differently from older consumers. Generally, young consumers are more likely to have richer online experience than do older consumers (Fang et al., 2016; Venkatesh et al., 2003, 2012).

The findings also show a significant difference of PSQ in online shopping within educational qualification categories involving all four dimensions as follows: access dimension ($H(2) = 7.335, p = 0.021$) (refer to Table 2), reliability dimension ($H(2) = 7.124, p = 0.017$) (refer to Table 3), EoU&A dimension ($H(2) = 8.393, p = 0.044$) (Table 4), and S&C dimension ($H(2) = 8.323, p = 0.037$) (Table 5). This shows that the data provide statistical evidence on the existence of a significant difference of PSQ in online shopping within educational qualification categories at all four dimensions. Therefore, H^2 was accepted. The importance of educational qualification in all the dimensions indicates

that academic qualification, which goes along with knowledge and experience (Klopping & McKinney, 2006), is a critical factor shaping individuals' perception of quality, believability, security concerns and ease of use access in relation to shopping in an online platform (Chiu et al., 2014).

Furthermore, Post Hoc test (refer to Appendix B) shows that a significant difference of PSQ in e-shopping exists within postgraduate and undergraduate and within secondary school/college and undergraduate pairs involving access dimension; within secondary school/college and undergraduate pairs involving reliability and EoU&A dimensions as well as within HND and ND/NCE categories involving S&C dimension. These results suggest that education is a critical factor in this context given that education here implies the level and depth of knowledge and life-long experience and age (as implied by educational grade) (Klopping & McKinney, 2006). Hence, online retail stores' management should not take it for granted that all categories of consumers in relation to knowledge, education, and life-long experience perceive their services in the context of accessing their web portals, sales sites, and social media pages in same way. If perchance, there is any way that they could identify the educational, knowledge or life-long experience status of level of their customers, they should follow the "ladies first" rule of thumb, meaning that they should treat the most educated, most knowledgeable, and most life-long-experienced customers a bit superbly different way than customers who possess

lesser degree of those qualities. However, by no means should any online store treat its customers who are less educated or have lesser degrees of life-long experience with any measure of inferiority.

A significant difference of PSQ in online shopping was also discovered in consumers' gender involving reliability dimension (with a significance value, $p = 0.001$) (Table 6). Similarly, a significant difference of PSQ in online shopping was found in gender and marital status within access dimension (with significance values, $p = 0.033$ and $p = 0.041$, respectively) (Table 6) and within EoU&A dimension (with significance values, $p = 0.001$ and $p = 0.050$, respectively) (Table 6). This shows that the data provide statistical evidence of the presence of a difference in the influence of consumers' gender and that of marital status on PSQ in online shopping. Therefore, H[3] was accepted. However, no significant difference of PSQ in shopping within age and marital status was found at S&C dimension.

Previous research has demonstrated that gender (Venkatesh et al., 2012) and marital status (Izogo et al., 2012) affect consumers' online behaviour significantly. Although marital status is less often associated with people's online consumption behaviour, some case studies have suggested that marital status affects consumers' online purchase behaviour (Izogo et al., 2012). Online stores should consider investing hugely in the improvement of their services and tailoring same to the consumers' gender difference in relation to making their services accessible online, creating

easy-to-use features (e.g., on their websites) and stuffing their websites, social media profiles, and other entrepreneurial online sits with interesting information and attractive layouts.

This study did not find any significant difference of PSQ in online shopping within consumers' monthly income involving all four dimensions (Tables 2, 3, 4, 5, 6 and Appendices A, B and C). This shows that the data do not provide statistically significant evidence of the existence a difference in the influence of consumers' income on PSQ in e-shopping. All the results indicate a weak (non-significant) difference, which suggests that income does not, or weakly does influence consumers' PSQ regarding online shopping. This is a quite strange finding though. Hence, H[4] was rejected.

This finding implies that income plays a little or no role, neither in consumers' perception of the ease of access and use of e-shopping services nor in security concerns and believability of products and services' information in an online shopping environment, nor in reliability of products information online. In other words, all categories of consumers' income, regardless of level (whether low, moderate or high) perceive the service quality of online retail stores substantially the same. However, this may suggest that income plays the most important role in the actual purchasing of the products and online-related services such as Internet data or Wi-Fi rather than in gaining access to the already-available online retail services or its related services. This finding implies that income is a "leveller," or "flat-

rater" as far as online retail shops' service quality perception is involved. Therefore, online retail stores should try as much as possible to improve the quality of the services they render to their customers online regardless of the customers' financial status, income level, or purchase budget.

This study also discovered a significant difference of PSQ in online shopping within marital status involving access and EoU&A dimensions (Table 5). This shows that the data provide statistically significant evidence of a difference in the effect of marital status on consumers' PSQ in online shopping. Hence, H[5] was accepted. The salience of the difference of PSQ in e-shopping within marital status at access and EoU&A dimensions suggests that the variation in lifestyle led by married and single consumers can influence their perceived access to online shopping services as well as their perception of the ease of use associated with online shopping and attentiveness in the shopping environment online. It is gratifying to discover that married and single as well as male and female consumers perceive security and credibility of online shopping in similar ways. This finding is supported in Izogo et al. (2012). Therefore, e-stores' management should consider the marital status of their customers especially where such information would be required.

A significant difference of PSQ in online shopping was also found within consumers' occupation involving Reliability dimension (with a significance value, H (2) = 9.104, $p = 0.039$) (Table 3) and involving S&C dimension (with a significance value, H

(2) = 7.247, p = 0.025) (Table 5). This shows that the data provide statistically significant evidence of the presence of a difference in the influence of occupation on PSQ in e-shopping. Hence, H[6] was accepted. The significance of the difference within occupation categories involving reliability and S&C dimensions clearly suggests what trustworthiness of online retail stores' services, cyber-risk-free online shopping environment and believability of online retail stores' information (e.g., firm's location address, duration of ordered products' delivery, products prices, brand, sizes, etc.) do considerably affect consumers overall perception of PSQ of an online store. This is supported in Brengman, Geuens, Wijters, Smith and Swinyard (2005). Therefore, online retail stores' management should invest meaningfully in the improvement of their array of services and tailoring them to the specificity of the employment category of customers.

The Post Hoc test (Appendix C) to determine the difference in PSQ in e-shopping within occupational categories involving Private/Corporate Service employees and Civil (Public) Service employees' pairs with respect to reliability and S&C dimensions was significant, yielding these results: (H (1) = 7.262, p = 0.005) and (H (1) = 7.288, p = 0.005) respectively. A significant difference of PSQ in online shopping was found between private/corporate service employees and students pairs involving S&C dimension (with a significant value, H (1) = 5.231, p = 0.013). However, no significant difference of PSQ in e-shopping involving private/corporate service employees and students within reliability dimension was found. A longitudinal study in online shopping performed by Limayem, Khalifa and Frini (2000) agrees with these findings.

These findings have very important implications especially regarding the implication of consumers based on employment or job category difference involving online retail stores' reliability of product transaction services, credibility of product and enterprise information and, more importantly security of online shopping environment (e.g., online stores' business websites and platforms to be secure from malicious virus and cyber criminals such as hackers). Both categories of consumers (those working with public organisations and those working with private organisations) may have possessed some degrees of the appreciation of the effects of the presence or absence of online service reliability and cyber security issues, especially those of them whose job involves the use of computer and Internet.

CONCLUSION

All the six demographic variables, except for monthly income, show a significant difference of PSQ in e-shopping at various degrees of difference within all the four dimensions. Five hypotheses (H[1], H[2], H[3], H[5] and H[6]) are accepted while one hypothesis (H[4]) is rejected. However, consumers' age and gender categories show more significant difference of PSQ in e-shopping than does each of marital status, monthly income,

and occupation across all the contexts. In fact, monthly income shows no significant difference of PSQ involving all the four dimensions. Hence, consumers' income level does not, or little does influence their PSQ in e-shopping within all the contexts.

Among the three demographic characteristics with the most significant degree of difference of PSG in online shopping mentioned earlier, a significant difference of PSQ in e-shopping was discovered within educational qualification categories involving all the four dimensions. Particularly, significant difference exists between the highest educational qualification pair group (postgraduate and undergraduate) and between the lowest (secondary school/college) and undergraduate pair. Specifically, this implies that consumers with higher and lower EQ perceive online shopping service quality differently. Generally, in terms of EQ, this result implies that educated consumers' perception of e-shopping service quality can be affected by their education level; this further implies that their PSQ is not uniform, and needs to be treated with corporate cautious by online stores.

The degree of the difference of PSQ in online shopping involving consumers' age and gender categories is virtually equal, especially within access, EoU&A and S&C dimensions. Difference in PSQ involving EoU&A and S&C is more salient within age and gender categories. This result implies that consumers' age and gender play a significant role in shaping their perception of online service quality within the contexts

of gaining access to online market, ease of use (of online shopping applications, e.g., features and websites) as well as secure online shopping milieu and credible products information and reliable services. Since e-shopping involves e-transactions (Falode et al., 2016; Salimon, Yusoff, & Mokhtar, 2016) such as online payments, naturally online consumers would be concerned with the safety of their money and the security of credit cards' passwords. Hence, online stores need to invest heavily in the security of their online business sites, which ultimately translates into the security of their customers' online transactions.

The findings of this study have indicated that income does not, or weakly does influence consumers' PSQ, implying that online consumer services are treated in the same way by consumers of all categories of income. Furthermore, doing online shopping may certainly involve money (e.g., for purchasing products); but intrinsically, doing online shopping is blind to consumers' income category or level.

The finding that shows marital status has a significant difference of PSQ in online shopping involving access and EoU&A contexts implies that married and single consumers perceive online shopping service quality differently in terms of accessing online retail services, ease of use of online shopping features, and attractiveness of the online shopping platforms, which obviously could be due to difference in the lifestyle and responsibilities of married and single individuals in Nigeria (Izogo et al.,

2012). Single consumers are more likely to have ample leisure time to access online services and surf the web than are married individuals.

Similarly, the significant difference of PSQ in e-shopping within occupational categories is salient only in the contexts of reliability and S&C. The security of online transactions environments and credibility of products information online cannot be overemphasised, so is trustworthiness (reliability) of the services the online retail stores render to customers. However, the difference of PSQ in e-shopping involving reliability context is only significantly within consumers' occupational categories. Private/corporate employees perceive service quality differently from civil/public servants, so do private/corporate employees and students. However, civil/public servants perceive service quality equally with students. This result implies that private/corporate employees are more likely to purchase products/services online more than either civil/public servants or students are. One of the key reasons may be because in Nigeria, employees of private/corporate organisations usually earn better emoluments than do those working in public organisations (Chiejina & Olamide, 2014; NITDA, 2016).

Implications

These results have four implications. First, for online stores to make gains and succeed in e-business, they need to improve the access features of their business websites and social media pages, for example, by making the features in their websites more user-friendly, improving and regularly updating the security features in their websites and living up to the expectations of consumers in line with current, best global practices. Second, online retail stores need to invest meaningfully in adding value to their products and improving the quality of their services based on consumer-specificity, especially regarding age, gender, and educational qualification.

Generally, however, online stores need to treat the entire categories of their customers with the utmost esteem, in line with the best trends in practice. Thus, providing features in their websites and other online entrepreneurial portals and platforms that would require prospective customers to sign up with their demographic particulars such as gender, age/date of birth, profession/occupation, educational qualification, or online use experience, marital status and even range of monthly income can go a long way in providing them with useful customers' demographic data which can help them tailor their services to the specificity of their customers. Third, online stores need to identify their target markets/audiences and understand their occupational characteristics. Fourth, Nigeria is the most populous country in Africa, the largest economy and one of the countries with highest Internet penetration rates in the continent (Africa Ranking, 2016; FOTN, 2015). Hence, online retailers stand a great chance of making huge profits from the market because of the economy of scale provided they upgrade their services to

global standards regularly, paying critical attention to market environment differences and consumer-specificity.

Recommendations

This study recommends that online retailers should regard their customers' age and gender, especially regarding designing of home page websites, customers' e-shopping profiling and other virtual market platforms such as social networking sites pan pages. It is, however, of paramount importance for online stores to ensure that their business websites and platforms (portals) are cyber-secure and firewalled against any kind of cyber threats. Online stores should also put their online customers' educational background into consideration, especially when targeting consumer groups.

Online retailers should articulate their online business strategies by focusing on customer-group-specifics, that is, they should focus on dealing in products, providing credible product information, rendering reliable services, and displaying their business websites with meaningfully appealing outlays and user-friendly features. They should also treat with superior regarding the age, gender, educational level, and occupational/professional categories of their customers. Given that this study has discovered that consumers' monthly income levels are substantially blind to difference in PSQ, online stores need not tailor their services to the income level of their customers—customers of any category or level of income want, need and deserve esteem treatment and best services.

Furthermore, this study recommends that future research should determine whether consumers' fields of study influence their PSQ. Given that gender has been important in this study, future research should determine the category of customers based on gender that would be more likely to make online shopping based on perceived product quality (PPQ), perceived transaction site security (PTSS), perceived trust (PT), and displayed product price (DPP). Similarly, future research should determine which group of either married or single consumers would be more likely make online shopping based on those factors. Future research should also provide further understanding about whether persons with dependents, persons without dependents, or persons dependent on others would be more likely to make online shopping based on the above-mentioned factors. Finally, this study recommends that future research should adopt a different methodology, for example, regression analysis and determine the statistical relationship between the demographic variables and PSQ, intention to use online shopping website and/or adoption of online shopping.

REFERENCES

Africa Ranking. (2016). *Top 20 largest economies in Africa*. Retrieved September 20, 2016, from http://www.africaranking.com/largest-economies-in-africa/

Aminu, S. A. (2013). Challenges militating against adoption of online shopping in retail industry

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As of the time of this writing, the US-Dollar to Naira exchange rate is rallying around $1 = ₦360

in Nigeria. *Journal of Marketing Management, 1*(1), 23–33.

Babbie, E. (2010). *The practice of social research*. New York, NY: Wadsworth Cengage Learning. International Edition.

Barrera, R. B., García, A. N., & Moreno, M. R. (2014). Evaluation of the e-service quality in service encounters with incidents: Differences according to the socio-demographic profile of the online consumer. *Revista Europea de Dirección Y Económía de La Empresa*, *23*(4), 184–193.

Birkin, M., Clarke, G., & Clarke, M. (2002). *Retail geography and intelligent network planning*. Chictster, UK: Wiley.

Brengman, M., Geuens, M., Wijters, B., Smith, S. M., & Swinyard, W. R. (2005). Segmenting Internet shoppers based on their web-usage-related lifestyle: A cross-cultural validation. *Journal of Business Research*, *58*, 79–88.

Business Directory. (2016). *Marketing strategy*. Retrieved January 23, 2016, from http://www.businessdirectory.com/definition/marketing-strategy.html on 23 January 2016.

Cai, S., & Jun, M. (2003). Internet users' perceptions of online service quality: a comparison of online buyers and information searchers. *Managing Service Quality*, *13*(6), 504–519.

Chang, J., & Samuel, N. (2006). Why purchase online? An empirical study of Australian internet shoppers. *Studies in Business and Economics*, *12*(1), 69–79.

Chen, S., & Macredie, R. (2010). Web-based interaction: A review of three important human factors. *International Journal of Information Management*, *30*(5), 379–387.

Chiejina, C., & Olamide, S. E. (2014). Investigating the significance of the 'pay on delivery' option in the emerging prosperity of the Nigerian e-commerce sector. *Journal of Marketing and Management*, *5*(1), 120–135.

Chiu, C., Wang, E., Fang, Y., & Huang, H. (2014). Understanding customers' repeat purchase intentions in B2B ecommerce: The roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal*, *24*, 85–114.

Chukwu, B. I., & Uzoma, I. C. (2014). Impact of social media networks on consumer patronage in Nigeria: A study of Jumia and Konga Nigeria Limited. *European Journal of Business and Management, 6*(30), 63–70.

Cochran, W. G. (1977). *Sampling techniques. 98,* 259-261. New York, NY: Wiley and Sons.

Conover, W. J. (1999). *Practical nonparametric statistics* (3rd ed.). New York, NY: Wiley.

Cowart, K. O., & Goldsmith, R. E. (2007). The influence of consumer decision-making styles on online apparel consumption by college students. *International Journal of Consumer Studies, 31*(6), 639–647.

Demsar, J. (2006). Statistical comparisons of classifiers over multiple data sets. *Journal of Machine Learning research, 7*, 1–30.

Doostar, M., Akbari, M., & Abbasi, R. (2013). Impact of demographic characteristics on relationship between customers' perceived service quality and websites' services in electronic markets. *International Research Journal of Applied and Basic Sciences*, *5*(5), 530–537.

Edvardsen, B., Tomasson, B., & Ovretveit, J. (1994). *Quality of service: Making it really work*. New York, NY: McGraw-Hill.

Falode, B. O., Amubode, A. A., Adegunwa, M. O., & Ogunduyile, S. R. (2016). Online and offline shopping motivation of apparel consumers in Ibadan metropolis, Nigeria. *International Journal of Marketing Studies*, *8*(1), 150–160.

Fang, J., Wen, C., George, B., & Prybutok, V. R. (2016). Consumer heterogeneity, perceived value and re-purchase decision-making in online shopping: The role of gender, age and shopping

motives. *Journal of Electronic Commerce Research*, *17*(2), 116–131.

FOTN. (2015). *Freedom on the net report 2015: Nigeria*. Retrieved February 1, 2016, from https://freedomhouse.org/report/freedom-net/2015/nigeria

Francis, J. E. (2005). Internet retailing quality: A conceptual perspective. In S. Purchase (Eds.), *Proceedings of the Australian and New Zealand Marketing Academy Conference* (pp. 64-72). Fremantle, Australia: Australian and New Zealand Marketing Academy.

Ganesan-Lim, C., Russell-Bennett, R., & Dagger, T. (2008). The impact of service contact type and demographic characteristics on service quality perceptions. *Journal of Services Marketing*, *22*(7), 550–561.

Goldsmith, R. E., & Bridges, E. (2000). E-tailing versus retailing: Using attitudes to predict online buying behaviour. *Quarterly Journal of Electronic Commerce, 1,* 245–253.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. Englewood Cliff, NJ: Pearson Prentice Hall.

Ibrahim, A. M., Hassan, M. S., Usman-Buni, J., & Dahiru, A. S. (2015). Factors affecting adoption of e-shopping among Nigerian students: Conceptual framework. *Journal of Research on Humanities and Social Sciences, 5*(13), 75–92.

Ibrahim, A. M. , Hassan, M. S. H., & Yusuf, S. (2018). Factors Determining E-Shopping Compliance by Nigerians. In *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 2761-2772). Hershey, PA: IGI Global.

Ilias, A., Hasan, H. F. A., & Rahman, R. A. (2009). Student satisfaction and service quality: Any differences in demographic factors? *Inernational Business Research*, *1*(4), 131–143.

Internet World Stats. (2017). *Use and population statistics: Africa: Nigeria Internet and telecommunications reports*. Retrieved September 6, 2017, from http://www.internetworldstats.com/africa.html

Izogo, E. E., Nnaemeka, O. C., Onuoha, A. O., & Ezema, K. S. (2012). Impact of demographic variables on consumers' adoption of e-banking in Nigeria: An empirical investigation. *European Journal of Business and Management*, *4*(17), 27–39.

Jun, M., Yang, Z., & Kim, D. (2004). Customers' perceptions of online retailing service quality and their satisfaction. *International Journal of Quality & Reliability Management*, *21*(8), 817–840.

Kaiser, H. F., & Rice, J. (1974). Little Jiffy, Mark IV. *Educational and Psychological Measurement*, *34*, 111–117.

Kalia, P., Singh, T., & Kaur, N. (2016). An empirical study of online shoppers' search behaviour with respect to sources of information in Northern India. *Productivity: A Quarterly Journal of the National Productivity Council*, *56*(4), 353–361.

Kaplan, A., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizon, 53*(1), 59–68.

Kenny, D. A. (2014). *Measuring model fit*. Retrieved August 28, 2015, from http://davidakenny.net/cm/fit.htm#RMSEA

Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research*, *44*(3), 486-507.

Kietzmann, J. H., & Hermskens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, *54*, 241–251.

Kim, E. Y., & Kim, Y.-K. (2004) Predicting online purchase intentions for clothing products. *European Journal of Marketing, 38*(7), 883–897.

Kim, S. & Stoel, L. (2004). Apparel retailers: Website quality dimensions and satisfaction. *Journal of Retailing and Consumer Services*, *11*(2), 109–117.

Klopping, I. M., & McKinney, E. (2006). Practice makes a difference: Experience and *e*-commerce. *Information Technology Learning and Performance Journal, 24*(1), 25–37.

Korgaonkar, P. K., & Wolin, L. D. (1999). A multivariate analysis of web usage. *Journal of Advertising Research, 39,* 53–69.

Kumbhar, V. M. (2011). Factors affecting the customer satisfaction in e-banking: Some evidence from Indian banks. *Management Research and Practice*, *34*(4), 1–4.

Lastovicka, J. L. (1982). On the validation of lifestyle traits: A review and illustration. *Journal of Marketing Research, 19,* 126–138.

Lewis, B. R., & Mitchell, V. W. (1990). Defining and measuring the quality of customer service. *Marketing Intelligence & Planning, 8*(6), 11–17.

Lian, J., & Yen, D. (2014). Online shopping drivers and barriers for older adults: Age and gender differences. *Computers in Human Behaviour*, *37*, 133–143.

Limayem, M., Khalifa, M., & Frini, A. (2000). What makes consumers buy from Internet? A longitudinal study of online shopping. *IEEE Transactions on Systems, Man and Cybernetics-Part A: Systems and Humans*, *30*(4), 421–432.

Ling, K. C., Chai, L. T., & Piew, T. H. (2010). The effects of shopping orientations, online trust and prior online purchase experience toward customers' online purchase intention. *International Business Research, 3*(3), 63–76.

Logan, K. (2014). Why isn't everyone doing it? A comparison of antecedents to following brands on Twitter and Facebook. *Journal of Interactive Advertising, 14*(2), 60–72.

Long, M., & McMellon, C. (2004). Exploring the determinants of retail service quality on the Internet. *Journal of Services Marketing*, *18*(1), 78–90.

Malhotra, N. K. (2004). *Marketing research: An applied orientation.* Upper Saddle River, NJ: Prentice-Hall.

Malhotra, N. K., & Birks, D. F. (2007). *Marketing research: An applied approach*. London, UK: Pearson Education.

Marchiniak, R., & Bruce, M. (2004). Identification of UK fashion retailer use of web sites. *International Journal of Retail & Distribution Management, 32*(7), 386–393.

Maynes, E. S. (1976). *Decision-making for consumers: An introduction to consumer economics*. New York, NY: Macmillan.

Merrilees, B., & Miller, D. (2005). Emotional brand associations: A new KPI for e-retailers. *International Journal of Internet Marketing and Advertising, 2*(3), 206–218.

Min, S., & Khoon, C. C. (2013). Demographic factors in the evaluation of service quality in higher education: International student's perspectives. *International Review of Management and Business Research*, *2*(4), 994–1010.

Monsuwe, T. P., Dellaert, G. C. B., & Ruyter, K. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management, 1*(1), 102–121.

Moschis, G. P. (1976). Social comparison and informal group influence. *Journal of Marketing Research, 13,* 237–244.

National Information Technology Development Agency (NITDA). (2016). *E-Nigeria 2016*. Retrieved on 22 September, 2016, from http://www.nitda.gov.ng/event/e-nigeria-2016-2/ .

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, *64*(1), 12–40.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1986) SERVQUAL: A multiple-item scale for measuring customer perceptions of service quality. *Report No. 86-108*, Marketing Science Institute, Cambridge, MA.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implication. *Journal of Marketing, 49*, 41–50.

Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, *7*(10), 1–21.

Park, J., & Stoel, L. (2005). Effect of brand familiarity, experience and information on online apparel purchase. *International Journal of Retail & Distribution Management, 33*(2), 148–160.

Phang, C. W., Kankanhalli, A., Ramakrishnan, K., & Raman, K. S. (2010). Customers' preference of online store visit strategies: An investigation of demographic variables. *European Journal of Information Systems*, *19*(3), 344–358.

Pretorios, A. (2010). Factors that contribute towards improving learning effectiveness using a specific learning management system (LMS) at the military academy (MA): A demonstration. *Campus-wide Information Systems*, *27*(5), 318–340.

Reuters. (2015). 'Facebook rakes in users in Nigeria and Kenya, eyes rest of Africa.' *Reuters*, September 10. Retrieved on 12 September, 2016, from https://www.reuters.com/article/us-facebook-africa/facebook-rakes-in-users-in-nigeria-and-kenya-eyes-rest-of-africa-idUSKCN0RA17L20150910.

Robinson, S. (1999). Measuring service quality: Current thinking and future requirements. *Marketing Intelligence & Planning*, *17*(1), 21–32.

Rowley, J. (2009). Online branding strategies of UK fashion retailers. *Internet Research, 19*(3), 348–369.

Salimon, M. G., Yusoff, R. Z., & Mokhtar, S. S. M. (2016). The influence of e-satisfaction, e-trust and hedonic motivation on the adoption of e-banking and its determinants in Nigeria: A pilot study. *Mediterranean Journal of Social Sciences*, *7*(1), 54–63.

Salmeron, J. L., & Hurtado, J. M. (2006). Modelling the reasons to establish B2C in the fashion industry. *Technovation, 26*(7), 865–872.

SanchezPerez, M., Sanchez-Pernandez, R., Marin-Carrillo, G., & Gazquez-Abad, J. C. (2007). Service Quality in Public Services as a Segmentation Variable. *The Service Industries Journal*, *27*(4), 355–369.

Sekaran, U. (2003). *Research methods for business: A skill building approach.* New York, NY: Wiley.

Siddiqui, N., O'Malley, A., McColl, J. C., & Birtwistle, G. (2003). Retailer and consumer perceptions of online fashion retailers: Web site design issues. *Journal of Fashion Marketing and Management, 7*(4), 345–355.

Sproles, G. B. (1985). From perfectionism to faddism: Measuring consumers' decision-making styles. *Proceedings of American Council on Consumer Interests, 31,* 79–85.

Van Iwaarden, J., van der Wiele, T., Ball, L., & Millen, R. (2003). Applying SERVQUAL to web sites: An exploratory study. *International Journal of Quality & Reliability Management, 20*(8), 919–935.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly, 36*(1), 157–178.

Vrechopoulos, A. P., Siomkos, G. J., & Doukidis, G. I. (2001). Internet shopping adoption by Greek consumers. *European Journal of Innovation Management*, *4*(3), 142–153.

Westbrook, R. A., & Black, W. C. (1985). *A Motivation-based shopper typology. The Journal of Retailing, 61,* 78–103.

Wisniewski, M. (2001). Using SERVQUAL to assess customer satisfaction with public sector services. *Managing Service Quality*, *11*(6), 380–388.

Wu, L., Chen, K., Chen, P., & Cheng, S. (2014). Perceived value, transaction cost and re-purchase intention in online shopping: A relational exchange perspective. *Journal of Business Research*, *67*, 2768–2776.

Yoon, H., & Occena, L. (2015). Influencing factors of trust in consumer-to-consumer electronic commerce with gender and age. *International Journal of Information Management*, *35*(3), 352–363.

Zhou, L., Dai, L., & Zhang, D. (2007). Online shopping acceptance model: A critical survey of consumer factors in online shopping. *Journal of Electronic Commerce Research*, *8*(1), 41–62.

Zhou, Z., Jin, X., & Fang, F. (2014). Moderating role of gender in the relationships between perceived benefits and satisfaction in social virtual world continuance. *Decision Support Systems*, *65*, 69–79.

SOCIAL SCIENCES & HUMANITIES

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The Separation Wall in the Occupied Palestine as a Canvas of Resistance: A controversial Issue

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ABSTRACT

The separation wall in occupied Palestine built by the Israeli occupation to isolate the West Bank from other parts of the Palestinian territories has turned into a huge screen for Palestinian and foreign artists to display various kinds of art works, including paintings, pictures, drawings, videos as a means of resistance against the occupation. These visual arts have become a controversial issue among the Palestinians. Some still consider these arts as a form of resistance against the wall and the occupation as well; while others consider them as a means of 'beautifying' the wall as perceived by the Palestinians and the people in the rest of the world. Therefore, this paper explores and illustrates selected visual works associated with the 'separation' wall in the occupied Palestine to identify the underlying meanings and implications of such works. The descriptive and observation approach was utilized to analyze the selected visual arts. The illustration in this study showed that the visual arts depicted on the separation wall in occupied Palestine have gained ample attention from Palestinians and foreigners. It also showed that the majority of the visual arts associated with the separation wall reflect the ugly face of this wall by presenting its negative consequences on the Palestinians' life in all aspects. However, other visual arts try to indirectly beautify the wall at the local and international levels by justifying building this wall and presenting its benefits for both the Palestinians and the Israelis. To conclude, the visual arts dealing with the separation wall have multiple references, objectives and effects on the Palestinian resistance against the occupation and the wall, and also on the people outside Palestine. Such arts should be monitored and examined to serve the Palestinian issue in the desired way.

Keywords: Occupied Palestine, separation wall, Zionist occupation

INTRODUCTION

Palestine has been under the "Israeli" direct military occupation since 1948. This brutal occupation has committed countless of merciless atrocities against the Palestinians including killing and arresting people, bombing and demolishing houses, uprooting trees, closing academic institutions, imposing blockade, restricting the Palestinians' movement in their land and depriving them of their human basic rights. One of these unjust activities is building a wall (extending over 772 km) to separate the West Bank from the other parts of Palestine. The construction of this wall started in 2002 and was totally completed in 2015. The wall is made up of a variety of different components, including fences, ditches, razor wire, groomed sand paths, an electronic monitoring system, patrol roads, and a buffer zone. It consists of 8-9 meter high concrete slab segments that are connected into a wall (Figure 1). The wall has been referred to as a 'separation' or "apartheid wall" because it has segregated the Palestinians socially, economically and geographically, and increased the Palestinians' suffer in all aspects of life. In essence, it is an "open air" prison. In 2004, the resolution of the International Court of Justice in Hague confirmed that this wall is illegal, considered the wall to be a hurdle before the Palestinians and foreigners in all various aspects of life (Al-Arda, 2005, p. 19).

Figure 1. Part of the 'separation' wall in the occupied Palestine

As a result of the construction of this separation wall, the Palestinians and foreigners supports have started a non-violent resistance against the wall and the occupation measures such as strikes, daily and Friday demonstrations, boycott, set-ins in front of international organizations, and using visual art and all of its components such as drawing art, graffiti art, photography art, video art, installation art, performance

art and sculpture art. Nowadays, large parts of this wall is covered by paintings, pictures, drawings and other kinds of art done by Palestinian and foreign artists, mainly those who are in solidarity with the Palestinian issues. It is said that the separation wall has become a living canvas of resistance and solidarity (Sethi and Chitleen, 2010, p. 5). At the same time it is a tourist destination and a popular site of 'pilgrimage' for international artists. According to Al-Nashashibi (2006), the separation wall had provoked the interests of Palestinian, Arab and foreign artists, and became the centre of their focus. Despite of this, these visual arts have become a controversial issue among the Palestinians. Some still consider these arts as a form of resistance against the wall and the occupation as well; and others consider these arts as a means of 'beautifying' the wall as perceived by the Palestinians and the people in the rest of the world. Therefore, this paper explored and explained selected visual works associated with the 'separation' wall in occupied Palestine to identify the underlying denotations and implications of such works.

METHODS

To serve the objectives of the study, the postcolonial theory was the foundation for explaining the collected data. The theory focuses on the outcomes or influences that the occupation desires to achieve when carrying out or allowing any activity (in this case, the visual artworks) on the separation wall in the occupied land (Palestine). The descriptive and observation approach was utilized to illustrate the selected visual arts (Mayring, 2000). A thorough literature was presented on artworks related to the separation wall in Palestine from magazines, newspapers, articles and TV and video shows. The researcher selected examples of artworks, categorized them and prepared them to explain and to identify their denotations and implications with regard to the Palestinian issue based on five determinants: The first determinant is ugliness; does the artwork contribute to the ugliness of the separation wall? Does the artwork beautify the separation wall? The second determinant is destruction of the wall; does the artwork call for destruction of the separation wall? The third determinant is equalization; does the artwork view the struggle of the Palestinians and Israelis equally? The fourth determinant is Palestinian art heritage; does the artwork belong to the Palestinian art heritage in terms of symbol and sign? The fifth determinant is the Palestinians' suffering; does the artwork show the Palestinian suffering due to the separation wall? In this paper, there are only four kinds of visual artworks, namely (drawing and painting arts, graffiti arts, photographic arts, and video arts) were presented based on real pictures as depicted in Figures 2 to 16.

RESULTS AND DISCUSSION

This section presents an illustration of selected examples of the visual arts related to the separation wall in the occupied Palestine. Each type is presented separately and supported by real pictures.

Drawing and Photographing

With the establishment of the separation wall by the Zionist occupation state on the Palestinian land, some international artists geared their works toward the wall and were able to spread contents filled with various incentives, objectives and purposes. Then it was an opportunity for the Palestinian artist to produce artworks that have vast attention for demonstrating his issues and deliver them all over the world; as he could draw all the sufferings and agonies he faces and all his dreams of freedom and dignity of land and humans, return of refugees and bringing back the rights to their beholders.

Having looked into the Palestinian artwork that is accomplished on the separation wall, one can see that they have presence in the local and international art industry through re-drawing the artistic symbols derived from the Palestinian heritage such as: Muftah al-daar (the house's key), *Handhalah* (*Palestinian* political *cartoonist* Naji al-Ali); Dome of the Rock and many others. It is worth noticing that the Palestinian artists strive to pass various messages to the people through art and its various fields. In the next lines, the researcher demonstrates some of these direct photographic artworks on the wall with details of their significance.

Figure 2. Palestinian hands are stronger than the separation wall

Figure 2 shows two hands grapping the separation wall making hallow through which Al-Qibli mosque Chapel and some other old houses in Jerusalem are seen. Looking closely at the hands, one can see that they are different in size as one of them is bigger than the other to indicate the participation and cooperation in confrontation. Cracks on the wall are also visible to show that the power of human is greater than the power of the building. This paint was done on the separation wall in 6 meters width and 3.5 meters height using acrylic colours and spray paint nearby the city of Ramallah. The figure represents the Palestinian artist's attempt to resist the occupier and his oppressive wall which divided the single nation to multiple tiny

clusters. The wall did not only isolate the cities from one another, but also did isolate Jerusalem from the *Ummah* (Muslim nation); the city that has the religious and historical essence to the Arab and Muslim nations. The Zionist colonizer strives hard to disrupt the Palestinian people intention away from the city of Jerusalem through the oppressive separation wall, and through tightening the siege and changing the appearances by building settlement units within the city. Thus, the role of the Palestinian artists is to tell the occupation that this is not possible, as the Palestinians will not allow the wall and the occupation to stay on their sacred land, and that Jerusalem will return to Palestinians as it is their past, present and future, and the wall and occupation will have to vanish no matter how long they remain (Al-Qablawi, 2005).

Figure 3. Young Yasser Arafat

In Figure 3, this gigantic painting drawn by a French artist Vince Seven is one of the artworks that addressed the separation wall as a material through drawing. It shows the Palestinian president Yaser Arafat in the figure. Some Palestinian figures were drawn on other paintings on the wall and their influence on the Palestinian arena such as Marwan Barghouthy[1] and poet Mahmoud Darwish[2]. Receivers may think that those paintings (that have figures) serve the Palestinian issue, while the author believes that those figures on the separation wall are the crown on this wall. This is because these paintings are drawn on the separation

North Africa) https://chronicle.fanack.com/palestine/faces/marwan-al-barghouthi-from-detention-to-presidency/ February 26th, 2015.

1 Barghouthi, born in 1959 in Kobar, near Ramallah, is one of the most prominent Palestinian public figures and an icon of Fatah. He has spent most of his life in Palestinian politics, especially the Fatah movement.
By (Fanack Chronicle of the Middle East &

2 Mahmoud Darwish is a Palestinian poet and author who won numerous awards for his literary output and was regarded as the Palestinian national poet. In his work.
By (CC-BY-SA) http://www.poemhunter.com/mahmoud-darwish/9 August 2008 / Palestinian)

wall; they remain visible to all people for long time, viewing them as they go about their daily business; and these paintings will be the centre of peoples' admiration for its significant content (i.e., symbols, national and revolutionary significance). However, these paintings on the separation wall have become as a controversial issue. The Palestinians may unintentionally develop love for the wall as a result of their love to those figures drawn on the wall. This is what the author does not wish to happen. The Palestinian national figures must be inculcated in people's hearts, and so some memorials should be built to remind people about them away from the separation wall which unfortunately, in most cases, turned into a place for various artworks, or apology paint or a place for announcements and slogans. This surely has led to removing its main ugly purpose which is military in nature. Khaled Jarrar believed that the works of artists on the wall have turned it into a center of attraction and they are not supposed to turn the wall into a beautiful scene that receives acceptance. Kiswani (2010) explicated that many critics and authors believed that the artworks dealt with the separation wall as material and did not serve the Palestinian issue in any way. This is also indicated by the member of the Popular Committee against the Wall in Tulkarem city, Fathi Baleblah by saying: "the separation wall in its appearance and design looks like the walls of cells of the occupation with the purpose of harming the psyche of the Palestinians; however, the other side of the wall does not reflect the same fact." The author believes that what Belablah claims is the truth as the occupation government hid the ugly aspect of the wall from the Jews and the settlers by establishing the flourishing gardens and flowers in vast areas of tens of meters to hide the high concrete wall and guard towers. At the same time, we may simply express our intentions on the eastern side of the wall. Therefore, we must strive to bring in hope and constancy instead of despair to our Palestinian people, and support them with the spirit of challenge and persistence so that we may have a Palestinian individual who strives to free his land from the Zionist's hands.

Figure 4. Fun hands

One of the paintings that addressed the separation wall is depicted in Figure 4. For the first time, when you look at the artwork drawn on the separation wall, you feel that you are in a garden or children garden. This work attracts children and brings them joy and pleasure. This type of drawings brings tranquillity to the child and acceptance toward the place while reducing the state of rejection towards it. At this point, the author fears that this work is geared toward children as to make them love the place which may continue to grow till they are matured and get familiar with

it as time goes by. This definitely serves the occupier's belief that elderly people die and children grow and forget. Looking into this artwork, it is obvious that this artwork does not deal with this oppressive wall in its real essence as it does not address the misery and destruction the wall caused; and it does not provoke any sense of pain or danger that the wall has caused to the Palestinians in their land. Therefore, it is compulsory to support confrontation towards the Zionist occupation in our children's minds till the occupation is over and normalization of all types should be rejected.
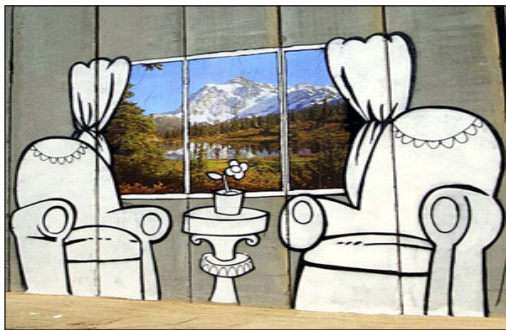
Figure 5. Armchair (original)

Figure 6. Armchair (modified)

The British artist Robert Pancake has lots of artworks on the wall, some of which are (the windows) as depicted in Figures 5 and 6. Pancake accomplished his artwork on the separation wall nearby Bethlehem city, at 5 meters height and 5 meters wide using acrylic colours and sprays. These are the tools Pancake uses throughout his artwork. When looking into the artwork, one may perceive it as a hospitality room that contains a window that reveals attractive scenery outside the room. At the same time,

chairs are seen in white and black colours which indicate that life outside this wall is enjoyable. Some believe that artwork has opened a window on the land which had been blocked from its people by the wall as to preserve it in the memory. This paint was rejected by some Palestinian individuals as in Figure 6, who believe that this paint causes Palestinians to reduce their hostility toward the wall, and it beautifies the ugly wall. It is obvious that Pancake did not address the aggression of the occupation

toward the Palestinian land. Despite the varying stands toward the artwork on the wall, Malu Halasa (2014) pointed, in her artwork (the oppressive beauty), her refusal of turning the wall into a piece of artwork and explained that beauty may be horrible or promising at the same time. Halasa showed the dispute between beautifying the image of the wall and the essence of resisting the wall. As the wall has become an integral part of the Palestinians' life, it is obligatory upon various artists from different parts of the world with different backgrounds and cultures to review back the influence of the wall on their identity and activities related to settling or migrating in some specific places. Despite the fact that this work reflects the atrocities of the scene, carries a lot of significances and addresses the issue of controlling and governing, shares with people in presenting personal issues,

and suggests how to restore control, there are still questions pertaining to turning the wall into mere artwork that is presented in artwork exhibitions. Halasa strives to figure out how art can have the power of debating as some rebel works are created to show their producers' perspective, and explains how it is possible for the art to have greater influence and interpretation of the reality of the building where artists present their viewpoints about it.

Graffiti Art

Several of Graffiti Art types have been seen on the separation wall as artistic symbols that accompanied the Palestinian issue along the years of occupation and its continuous oppression they include for example, *Handhalah*, house's key, victory signs, hand fists, Palestinian flags, martyrs and others.

Figure 7. Handhalah

Figure 7 represents a direct artwork on the separation wall, which shows a boy as *Handhalah*. This artwork carried the signature of Naji Al-Ali despite his death

decades ago; as if the artist who designed it intends to pass the message that: Naji al Ali is still alive in the Palestinians' hearts, and his icon *Handhalah* is still the icon of

return to artists who have been exiled. It also represented the state and identity of the Palestinian people in exile away from their land. Drawing this symbol on the wall informs that this wall represents an

exceptional case in the Palestinian history, and that things will go back to normal when everyone returns to the home country after removing the occupation.

Figure 8. Freedom for the Honourable

Symbols that were intensively used by Palestinian artists in exile returned to interface again. The house's key (Figure 8) is one of the symbols that were created by the Palestinian artists to express the right of returning to homeland, Palestine, from the exile. Two American artists How and Nosm did this graffiti artwork to declare their support for the Palestinian people and demonstrate their rejection of the separation wall. The key represents the dream and hope of returning to the extorted land and that the occupation and its wall will no doubt fade away, no matter how long it takes. It is important to highlight that part of the graffiti artwork drawn on the wall represents several artistic symbols that are away from the Palestinian artistic heritage and the Palestinian issue that dealt with the separation wall. Owners of these artworks believe that they support the humanitarian

rights, whilst Palestinians perceive them as a kind of humiliation for their resistance. These symbols have faced collective rejection by majority of Palestinians, to the extent they have removed them, insisting that these works do not include any hostility toward the occupation (Rojo & Harrington, 2013).

The British artist, Robert Panski did the graffiti artwork in Figure 9. Such artworks are related to the artist's culture and attitude. Some of these works were rejected by Palestinians and asked for removing them. For Robert Panski and other foreign artists, the rat and donkey represent oppressed people according. However, to the Palestinian people, neither such pictures belong to the Palestinian heritage of art nor they represent the Palestinian issue. They have also seen them as a symbol of insult that must be removed.

Figure 9. Ghetto Rat 2007

Figure 10. One love Palesrael (peace)

Figure 11. Five fingers of the same hand

Figures 10 and 11 are graffiti artworks directly drawn on the wall for which the purpose was not only to send political messages but to direct the receivers that the wall represents peace between the two states that enjoy peace and intimacy whether it was intended to be in such way or not. Here, the artist forgot or pretended to forget the destruction this wall caused, and thus, he equalized between the 'executioner and the prey.' The artist placed himself as a caller to peace and love between religions which is one of the noblest things an artist can do, with the condition that this is not done at the expenses of the oppressed people. He should have been unbiased by supporting the oppressed and not disclosing the aggressor away from other considerations (ALAZAH, 2012).

Photographic Art

It is said that a picture is more expressive than speech, as a single picture expresses thousands of words, and it is a window for

expressing the humanitarian cases with the most honest sense and in various forms (Al-Qablawi, 2005). On the separation wall, there are several photos show scenes of Palestinians' resistance against the Israeli occupation and the wall as well. This part explains the significance of some photos pertaining to the separation wall directly.
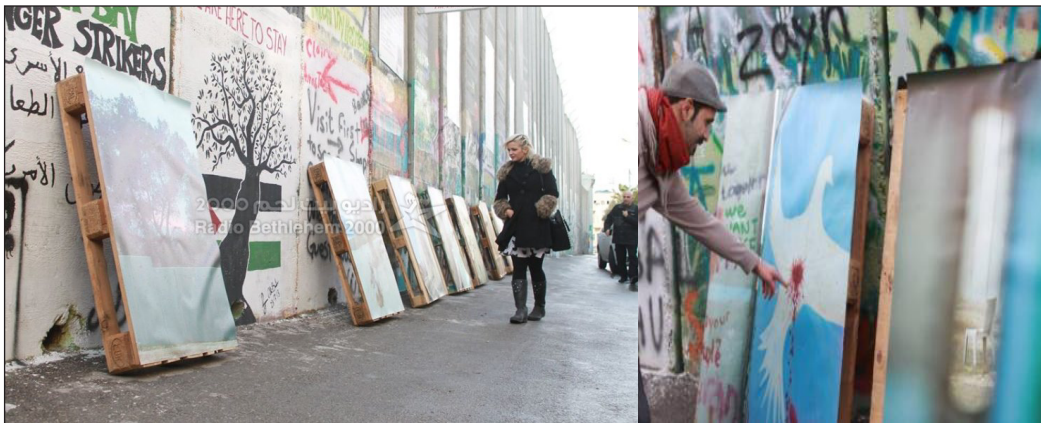
Figure 12. Behind the wall

The artistic shapes represent photos of the wall in the city of Bethlehem by the Palestinian artist, Iliyas Halabi. Al-Halabi tried to document Palestinians' life which is negatively influenced by the wall. In these photos (Figure 12), he took photos for various houses and the surroundings. The researcher believes that this kind of photographic artworks and presenting them to viewers play a vital role. It reminds the Palestinian people of their sacred lands and houses beyond the wall, and contributes to allowing people to view their belongings that were lost beyond the wall, and keeping them in their memory.

The Video Art

Some artists resorted to modern tools such as the videos art. These videos like other means of arts have their own material and tools of production and usage. Here we are not referring to technological techniques, but ways of artistic expressions through which an artist strives to pass his message to the world and to highlight what the Palestinian people are facing. With the varying content of various arts, videos are unique in that they address deeply and more objectively the different issues, especially the Palestinian issue as compared to other previous arts. The author mentions examples for this art, and points to issues in terms of its relation to the separation wall.

In Figure 13, the Jewish Simon Beiton, a French national, presented a video about the separation wall directly nearby the city of Ramallah. The show included the resulting state of the wall. The video lasted for one hundred minutes. Since Beiton is a western Jew, the presented material has created some

Figure 13. Against the wall

problems, as it invites humanitarian support against the wall but allows, at the same time space, for the Israeli's view point to express its justifications for building the wall. When one looks at the presented material through the video, one can see that both the

Palestinian and Zionist people are equally sieged because of the wall. Therefore, she makes it acceptable to think that both people are equal which is surely wrong as the executioner should never be equalized to the prey (Yaqeen, 2012, p. 87).

Figure 14. The World Cup of 2010

Figure 14 addresses a video directly on the separation wall that contains a football match in the World Cup of 2010. The figure shows the audience that attended the match

which consisted of various nationalities coming together to watch the match with tensioned nerves and their attention being distracted away from the separation wall

and occupation of the Palestinian land. When one looks into the figure, one may think that there is an event or anniversary for which people come to attend. It is worth noticing that the video did not show the misery caused by the separation wall; did not suggest solutions that may help in bringing it down; and did not even motivate the audience to take initiatives toward the separation wall. Thus, it made the centre of attention of the attendants the presented material only; which team plays and which team is the winner away from the ugly wall.

This makes the wall a material on which everything maybe demonstrated which the author does not wish to happen. Raja' Shahadah, in the book, *Raqib Al-Jidaar,* believed that the way of showing images may affect attitudes, mentality, and thinking of individuals who live in a certain place.

On the other hand, some artists exploited performance art to serve the Palestinian issue and supported the concept that the wall would not continue to exist and that it would be forgotten as in Figure 15 and 16.

Figure 15. Power and challenge

Figure 16. The other half

Figure 15 and Figure 16 present visible performance art for the Palestinian artist, Raedah Sa'adah on the separation wall. This visible art documentary attempts to maintain in the memory of the Palestinian individual his nation, misery and the borders of his place. Raedah Sa'adah combines the subjective and objective dimensions as she makes of herself the heroine in the photos

she takes. She appears as a mysterious character as depicted in Figure 15, where she appears barefoot before the wall with a crown on her head, wearing a white long dress that has two wings at the shoulders. One of the wings appears trapped in the separation wall as an indication for the loss of half of the nation which is unable to fly without the other side. In Figure 14 the

picture of Raedah Sa'adah appears again as she tries to move the separation wall using a rope. The suffering that she is witnessing is not external but also internal. She is facing this suffering with a smile that indicates the depth, power and challenge of the persistent woman who protects her family and memories which have been violated by the concrete walls (Zibawi, 2014, p. 16).

RESULTS

Back to the problem that was highlighted earlier in this article, the visual arts on the separation wall are a controversial issue among the Palestinians. Some perceived it as a sort of resistance against the separation wall and the occupation. While other believed it was a kind of decoration to the wall. Based on the findings of the study, the author believes that it was a mistake to pass judgement on the artworks as a form of resistance or as decoration because the results of the article showed that artworks on the separation wall varied in their significances. Some of these works promoted resistance, patience and the spirit of challenge while other signified peace, love and harmony. Another portion of these works has totally ignored the suffering of the Palestinians due to the wall and therefore, it was considered to be of a decorative nature and was eventually removed.

CONCLUSION

The separation wall in occupied Palestine has become as a canvas for local and international artists to display their arts as a means of resistance against the Israeli occupation and the wall itself. Some Palestinians are supporting these arts for its significant role in their resistance against the wall and the occupation as well; and others are against these arts because such arts are only decorating and 'beautifying' the wall in the eyes of the Palestinians and the people in the rest of the world. This research has showed that these visual have gained ample attention from Palestinians and foreigners. It also showed that in general these visual arts have a role in displaying the negative consequences of the wall on the Palestinians' life in all aspects. Nevertheless, there are visual arts justifying the wall construction by indirectly beautifying the wall at the local and international levels and presenting its benefits for both the Palestinians and the Israelis. To sum up, all kinds of arts associated with the separation wall in occupied Palestine must be monitored and scrutinized as they have multiple references, objectives and effects on the Palestinians and people outside Palestine.

REFERENCES

Al-Arda, R. (2005). *Israeli Apartheid Wall in International Law* (Master thesis), An-Najah National University, Palestine.

Al Azah, M. (2012). Art is a common humane language. Palestine: *Beit Jibreen (handhalah)*, www.s2nn.com/index.php.

Al-Qablawi, M. (2005). The Palestinians are turning the facades of the separation wall to murals of Resistance. *Al-Rai Newspaper*. Retrieved November 6, 2016 from http://www.alrai.com/article.

Ashcroft, B., Griffith, G., & Tiffin, H. (1989). *The post-colonial studies reader*. London: Routledge, 1989. p 2.

Kiswani, B. (2010). *The separation wall between Jerusalem and Ramallah is turning from a tool for assault into one for resisting occupation*. Retrieved November 6, 2016, from http://www.bokra.net/Article-1106874

Mayring , P. (2000). Qualitative Content Analysis/ Philipp Mayring. In *Qualitative content analysis. Forum: Qualitative Social Research* (Vol. 1, No. 2).

Nashashibi, R. (2006). *Wall and psychological effects of short and long-term* (Master thesis), An-Najah National University, Palestine.

Rojo, J., & Harrington, S. (2013). HOW & NOSM on the Israeli-Palestinian separation wall [Blog post]. Retrieved November 10, 2016, from http://www.huffingtonpost.com/jaime-rojo-steven-harrington/israeli-palestinian-separation-wall.

Sethi, & Chitleen, K. (2010). *"Israel's "security" wall is world's largest protest graffiti"*. Retrieved November 6, 2016, from projectinterchange.org.

Yaqeen, T. (2012). *Funuun Jameelah wa jidaar qabeeh*. Ramallah: Beit al-Maqdis for Printing, Palestine .

Zibawi, A. (2014*).* Keep your eye on the wall have your thought focused on the Issue. *Al Arab Magazine*, *no.9440.* Doha, Qatar: Hamad Bin Khalifa University.

The Effect of Computerized Feedback on Students' Misconceptions in Algebraic Expression

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ABSTRACT

Misconceptions arise when students fail to link new knowledge to previous knowledge for which the brain has established. Students rely on existing knowledge to solve new problems. If a student holds a misconception, it will interfere with or distorts the assimilation of correct concepts. This study investigated the effect of computerized feedback on students' misconceptions in algebraic expression. A misconception test was computerized and feedbacks were designed accordingly to each response. From the results, there was no significant difference between treatment group and control group students before intervention. After intervention, treatment group students were having lower misconceptions mean score in post-test than in pre-test and the difference was statistically significant. Meanwhile, control group students were having higher misconceptions mean score in post-test than in pre-test and the difference was statistically significant. This shows that there is an effect of computerized feedback on students' misconceptions in algebraic expression. This study pinpoints the advantage of using computer-based test (CBT) in giving immediate feedback to students. This may encourage teachers and educators to use it as a tool to provide detailed and instant feedback to students in a timely manner.

Keywords: Algebraic expressions, computer-based test, computerized feedback, misconceptions

INTRODUCTION

Algebra is a branch of mathematics that substitutes letters for numbers. It uses common arithmetic operations that deal signs and symbols. It is the gatekeeper course to advanced study in mathematics (Robelen, 2013; Welder, 2012). Through algebra, reasoning, thinking, problem solving, patterns, and other skills can be

developed. However, students always face difficulty and having misconceptions in learning algebraic expression. Algebraic misconceptions can inhibit students from attaining the necessary concepts that are needed to be success in algebra (Russell, O'Dwyer, & Miranda, 2009). Misconceptions occur when students fail to link new knowledge to previous knowledge for which the brain has established cognitive networks (Hiebert & Carpenter, 1992). Once misconception is rooted in students' memory, it is hard to erase. As a result, students are not able to conceptualize the concept well and it influences their cognitive development (Cepni, Tas, & Kose, 2006). Therefore, it is important to let the students know what they did well and what they need to improve. Students should reflect on what they learned, how they learned, why they learned, whether the learning experience could have been more effective, and so on. This can build connections between new and existing knowledge, maximize opportunities for learning and avoid past mistakes. To achieve this, feedback plays an important role. It has been identified as one of the most powerful influences on the learning process (Hattie, 2009).

Research Problem

Nevertheless, the existing findings on the effectiveness of providing learners with different feedback content are rather inconclusive (Narciss et al., 2014). According to the critical review done by Shute (2008), there is large variability of feedback effect on students' learning.

The use of feedback comes with its own challenges: how much feedback is needed? When should it be given? (Bokhove & Drijvers, 2012; Marsh, 2012). One of the research gaps to be filled is the mode of feedback presentation. Nowadays, the application of educational technology is spreading fast, various powerful educational tools have been used, including computer-based testing (CBT), which students can be accessed and receive valuable feedback on their performance timely. Present available research does not provide evidence regarding how to integrate feedback in CBT so that it contributes positively to students' misconceptions (Van der Kleij et al., 2012). As learning environment continues to grow in this digital age, this motivates the research question in this study: is there any effect of computerized feedback on students' misconception in algebraic expression?

Research Purpose

To investigate, is there any effect of computerized feedback on students' misconceptions in algebraic expression.

Feedback

Feedback is the information presented to a learner in response to some action on the learner's part. It can be provided by an agent, such as teachers, friends, parents, books, experience regarding one's performance. Conroy et al. (2009) defined feedback as "information provided to children by teachers regarding their understanding or performance of academic or behavioral tasks" (p. 21). Butler and Winne (1995)

defined feedback as "information with which a learner can confirm, add to, overwrite, tune or restructure information in memory" (p. 263). Besides, Black and William (1998) defined feedback as "any information that is provided to the performer of any about the performance" (p. 37).

Feedback is an important component in new learning opportunity (Sanchez-Vera et al., 2012). The importance of feedback has been emphasized by educators since last decade (Felder, 1993; Freeman & Lewis, 1998). It is helpful in correcting students' errors (Marsh, 2012). Students like to be assessed and get value comments on their achievement (Lilley, Barker, & Britton, 2005). This is supported by Gibbs (1999) that "*learners require feedback in order to learn*" (p. 46). Also, supported by Economides (2006) that feedback produced significant benefits in learning and achievement across all content areas, knowledge and skill types, and levels of education. It has powerful influences on students' learning and achievement, and helps teachers to design learning content according to students' need (Hattie & Timperley, 2007; Matthews et al., 2012; Sanchez-Vera et al., 2012). It also can reduce the discrepancy between current and desired understanding (Hattie & Timperley, 2010).

Effective Feedback

Although feedback offers numerous advantages, the way it is given can be differentially effective. For feedback to be effective for students, it has to be deployed in a structured and meaningful manner (Chan & Leijten, 2012). Generally, effective feedback needs to be clear, purposeful, meaningful, and detailed in content (Bridge & Appleyard, 2005; Denton et al, 2008). Feedback must give affirmation of what students can currently do, what error they made, and what they need to do next to improve their understanding (Hattie & Timperley, 2007; Yorke, 2003). Avoid using judgmental feedback but constructive feedback that emphasizing on positive part, rather than negative part (Lalor, 2012). Meanwhile, strategies and direction should be given to help the students to improve. Also, feedback given to students must be in a timely manner (Hattie & Timperley, 2007; Mutch, 2003). Based on information and interpretation from literature review, a feedback structure has been proposed with the following stages in this study (Table 1).

Table 1
Component and criteria of effective feedback

Component	Details
Correctness	Telling the student about the correctness of the question. Examples:
	(a) Well done, the correct answer is "A".
	(b) The correct answer is "A", keep it up!
Information	Telling the student about the learning outcome of the question. Examples:
	This question is to identify unknowns in algebraic terms in two or more unknowns.
Reinforce	Reinforce what the student did well/error needs to be improved. Examples:
	(a) You are able to identify $3ab$, where a & b are unknowns.
	(b) Do you know that $3ab$, where a & b are unknowns?

Table 1 *(continue)*

Component	Details
Directive Guide	Showing the correct solution
Common Criteria	(a) Immediate feedback
	(b) Clear and easy to be understood
	(c) Positive component

Theoretical Framework

The theory used as the basic for this study is Ohlsson's Theory of Learning from Performance Errors (Ohlsson, 1996). There are two key components in learning from performance errors: (a) declarative knowledge and (b) procedural knowledge. Declarative knowledge is descriptive and use-independent. It consists of facts and principles. For example, the laws of distribution and the laws of multiplication. It is important in providing generality. Meanwhile, procedural knowledge is prescriptive and use-specific. It consists of association between goals, situations, and actions. For example, procedure for simplifying algebraic expression and explanatory strategies in biology. It is important in generating and organizing an action.

Declarative knowledge is dissociated with procedural knowledge as knowing *that* and knowing *how* is distinct. A student might has the declarative knowledge required to judge a performance as incorrect, but lack of the procedural knowledge required to perform better. Therefore, it is not surprising that students often did errors when they perform a task even if they have been taught the correct way. This is because their declarative knowledge has not been converted to procedural knowledge (Lee, 2008). Learning starts with accumulating declarative knowledge. It is then later converted into procedural knowledge through practice. When procedural knowledge is missing or is faulty, errors occur (Mitrovic, 2010).

The basic principles of this theory stated that errors are experienced as the conflicts or discrepancies between actual outcomes (correct answer) with the expected outcomes (incorrect answer). Ohlsson (1996, p. 242) defined error as "*inappropriate actions committed while performing a task.*" It can be defined as deviation from the correct solution as well. Although humans have the innate ability to catch themselves making errors, this ability has imperfections (Gilovich, 1991; Ohlsson, 1996). The ability to recognize an error is complex. Consequently, anyone can make a mistake. There are two phases in the process of learning from errors: (a) error detection and (b) error correction.
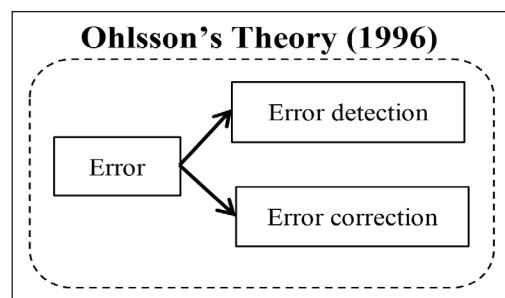
Figure 1. Ohlsson's theory (1996).

Ohlsson (1996) stated that it was paradoxical to hypothesize that learners could detect errors with the help of previous knowledge. A student would not perform an error in the first place if he or she has enough knowledge to recognize a particular action as incorrect. Errors are recognized through particular features of the situation they produced that indicate incorrect actions, so-called error-signals. It requires domain-specific declarative knowledge. For example, to recognize errors in simplifying an algebraic expression, a student must have some knowledge about like terms and unlike terms in algebraic expressions.

Error correction refers to the removal of an error from the existing knowledge in order to have improvement in future actions. It consists of three cognitive processes (Ohlsson, 1996; Petkova, 2008) as follows:

1. Blame assignment—the process of identifying the factors that contributes to an unexpected outcome (incorrect action and faulty rule) in a particular context.

2. Attribution of bad outcomes or error attribution—attributing errors to a particular action or identifying the situation that interacted with an action to produce an undesirable outcome.

3. Revision of faulty knowledge structures—repairing the error.

Learners must be aware of their errors in order to learn from them. If a student never learns what his or her errors are, he or she will never correct them. An error only can be corrected after it is detected. If a student does not possess such declarative knowledge, a feedback may play the role of a mentor and informs the student of his or her errors (Mitrovic, 2010). Feedback given during learning process can improve students' further performance by providing them an opportunity to learn from their errors (Randall & Zundel, 2012). A carefully designed feedback that reflects the action of a human teacher, helps the student to overcome problems in his or her knowledge. It can come from the environment itself or teacher, either a human or an artificial one.

METHODS

Participants and Design

A total of 120 Grade 7 students were involved in this study due to purposive sampling. Furthermore, it was also based on the suitability of syllabus. They were grouped into two independent groups as described in Table 2. Due to the school permission restraint to keep existing classrooms intact, this study used a pre-test/post-test quasi experimental design rather than true experimental design to investigate the effect of feedback. This is one of the most common quasi-experimental designs, which similar with the classic controlled experimental design, except that the participants are not randomly assigned to either control or treatment group.

Table 2
Demographic variables of the study

Group	Gender		Total	Percentage (%)
	Male	Female		
Control	49	7	56	47
Experimental	20	44	64	53
Total	69	51	120	100

Instrument

Algebraic Expression Misconceptions Test (AEMT) I and II. Two parallel forms of Algebraic Expression Misconceptions Test (AEMT I: Pre-test and AEMT II: Post-test) were constructed based on Grade 7 Mathematics syllabus in Malaysia. The test covers one learning objective: understand the concept of algebraic expression. It is further divided into three learning outcomes that consist of three cognitive

levels (according to Bloom's taxonomy): (a) low ledge: recognize algebraic expression; (b) understanding: determine the number of terms in given algebraic expressions; (c) application: simplify algebraic expression by combing the like terms. In total, 22 items were constructed by referring to textbook and reference books published locally. The allocated time for the test is 40 min. The test specification is shown in Table 3.

Table 3
Test specification

Learning Objective	Learning Outcomes	Cognitive Level*	Items	Selected-Response Items
Understand the concept of algebraic expressions	1. Recognize algebraic expressions.	One (Knowledge)	1–5	Binary
	2. Determine the number of terms in given algebraic expressions.	Two (Understanding)	6–10	Multiple choices
	3. Simplify algebraic expressions by combining the like terms.	Three (Application)		
	a. One unknown		11–16	Multiple choices
	b. Two unknowns		17–22	Multiple choices

* According to Bloom's Taxonomy

Distractor Setting

Good quality of distractors can ensure the credibility and objective picture of the test. Poor distractors would affect the accuracy

of the test (Mkrtchyan, 2011). Writing plausible distractors is one of the most difficult aspects in composing question. The distractors used should be plausible and attractive to be selected by students

who did not achieve the learning outcome but ignored by students who did achieve the learning outcome. Hence, distinguishing can be made between high-performing and low-performing students. To build good distractors, a pilot study was carried out.

A total of 50 Form One students were involved in the pilot study. To gather information of their existing misconception, they were tested with AEMT I in the form of open-ended items through paper-and-pencil test. They were required to write down their solution on the test paper provided. From the pilot test result, there are three major misconceptions found in simplifying algebraic expressions:

1. **Misconception with letter usage and conjoin error:** associate letters with their positions in alphabet. For example, interpret 8*b* as short for "8 boys." This is further transformed into an algebraic expression for 3*b* + 5*b* as 3 boys added to 5 boys. In turn, read 3*c* as 3 and *c*, and interpret it as 3 + *c*.

2. **Misconception with bracket usage:** omit to use distributive law in arithmetic. For example, for 3(*a* + 7), students performed in such way: 3(*a* + 7) = 3(7*a*) = 21*a*, rather than: 3(*a* + 7) = 3 x *a* + 3 x 7 = 3*a* + 21.

3. **Misconception with negative integers:** students believed that negative signs represent only the subtraction operation and do not modify terms. For example, made

detachment from the negative sign error, such as interpret –6*x* + 3*x* as – (6*x* + 3*x*) and further simplify it is –9*x*.

Possible answers resulted from the three common misconceptions found were used as distractors in the items in AEMT. Therefore, it is reasonable to assume that AEMT can be used to diagnose students' misconception. If a student is having misconception in letter usage and conjoin error, he or she will choose option B as the answer, and so for the other two misconceptions. Through this, all three misconceptions can be identified.

Computer-Based Test

Algebraic Expression Misconceptions Test I (AEMT I) was transformed into CBT test by using XAMPP and phpMyAdmin. Computerized feedback was presented to each group of students after an answer was clicked. For treatment group students, detailed feedback that comprised of the four elements was shown. For control group students, simple feedback (showing correct/incorrect) was shown.

Procedure

There were three main sessions involved in this study. Session 1 consisted of pre-test (AEMT I), it was administered to all the participants in the form of paper-and-pencil test (PPT) to determine their achievement in algebraic expression before the intervention.

Session 2 consisted of intervention phase. During this session, both control group and treatment group students took

the CBT. For control group, only simple feedback was presented after every question was answered. For example: "correct" or "wrong." For treatment group, detailed feedback was presented, which consists of the four elements as shown in Table 1. Session 3 consisted of post-test (AEMT II). To avoid testing effect, the items on the post-test were isomorphic equivalents of the pre-test items.

Before each test was started, clear instructions were given by researchers to both teachers and students involved. Students were informed that the result will not be taken into account as a part of the evaluation in their study. The highlight of this point is to gain students' confidence about the confidentiality of the questionnaire and avoid dishonesty. Respondents were

allowed to ask questions before the test was started. Time allocated for each test was 40 min. During the test, students were not allowed to talk and discuss with others. They were required to answer honestly and answer all the questions within the allocated time.

RESULTS

As the distractors in AEMT were designed according to students' misconception as discussed, the students' responses indicated that they held misconceptions in algebraic expression. Table 4 shows the treatment and control group students' responses in selecting correct answer and different misconceptions in both pre-test and post-test.

Table 4
Results of pre- and post-test concerning misconceptions

Responses	Treatment Group				Control Group			
	Pre-test		Post-test		Pre-test		Post-test	
	n	%	n	%	n	%	n	%
*Correct Answer	241	75	291	91	198	71	179	64
Misconception 1: Recognizing algebraic expression	79	25	29	9	82	29	101	36
*Correct Answer	202	63	243	76	148	53	123	44
Misconception 2: Determining the number of terms in given algebraic expressions	118	37	77	24	132	47	157	56
*Correct Answer	169	22	238	31	151	22	168	25
Misconception 3: Bracket usage	220	29	175	23	162	24	184	27
Misconception 4: Letter usage and conjoin error	186	242	142	18	168	25	170	25\2
Misconception 5: Negative integers	193	5	213	28	191	28	150	2

(n = number of entry; % = percentage)

Based on the number of entry, the mean scores for all the misconceptions were summarized and further examined by carrying out paired-samples *t*-test. Table

5 shows the results of paired samples *t*-test for the treatment group concerning misconceptions.

Table 5
Treatment group: Paired-samples t-test concerning misconceptions

Group	Misconception	N	Pre-test		Post-test		Pair	Paired differences					t	df	Sig. (two-tailed)
											95% Confidence Interval of the Difference				
			Mean	SD	Mean	SD		Mean	SD	Std. Error Mean	Lower	Upper			
Treatment	M1	64	1.23	0.527	0.45	0.532	Pre-test and post-test	0.781	0.548	0.069	0.644	0.918	11.4	63	0
	M2	64	1.84	0.479	1.2	0.78	Pre-test and post-test	0.641	0.784	0.098	0.445	0.836	6.536	63	0
	M3	64	3.44	0.639	2.73	0.802	Pre-test and post-test	0.703	0.849	0.106	0.491	0.915	6.629	63	0
	M4	64	2.91	0.75	2.22	0.745	Pre-test and post-test	0.688	1.052	0.132	0.425	0.95	5.227	63	0
	M5	64	3.02	0.766	3.33	0.818	Pre-test and post-test	−0.313	0.664	0.083	−0.478	−0.147	−3.767	63	0

*The higher the mean score, the higher the level of misconceptions

*M1= Misconception 1: Recognizing algebraic expression; M2 = Misconception 2: Determining the number of terms in given algebraic expressions; M3 = Misconception 3: Bracket usage; M4 = Misconception 4: Letter usage and conjoin error; M5 = Misconception 5: Negative integers

Based on the results, treatment group students were having lower misconceptions mean score in post-test than in pre-test for all the misconceptions except for M5.

Figure 2. Treatment group (mean score for misconceptions in pre- and post-test).
*M1= Misconception 1: Recognizing algebraic expression; M2 = Misconception 2: Determining the number of terms in given algebraic expressions; M3 = Misconception 3: Bracket usage; M4 = Misconception 4: Letter usage and conjoin error; M5 = Misconception 5: Negative integers

Meanwhile, similar analysis was carried for control group, to see the effect of feedback on their misconceptions in algebraic expression. Table 6 shows the results of paired samples *t*-test for the control group concerning misconceptions.

Based on the results, control group students were having higher misconceptions mean score in post-test than in pre-test for all the misconceptions except M5. The difference between means was statistically significant for all the misconceptions, except for M4.
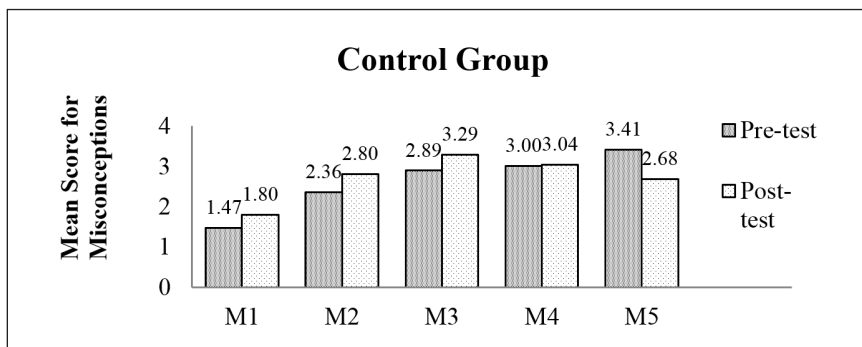
Figure 3. Control group (mean score for misconceptions in pre- and post-test).
*M1= Misconception 1: Recognizing algebraic expression; M2 = Misconception 2: Determining the number of terms in given algebraic expressions; M3 = Misconception 3: Bracket usage; M4 = Misconception 4: Letter usage and conjoin error; M5 = Misconception 5: Negative integers

Table 6
Control group: Paired-Samples t-*test concerning misconceptions*

Group	Misconception	N	Pre-test		Post-test		Pair	Paired differences							
			Mean	SD	Mean	SD		Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (two-tailed)
											Lower	Upper			
Control	M1	56	1.46	0.602	1.8	0.699	Pre-test and post-test	−0.339	0.859	0.115	−0.569	−0.109	−2.957	55	0.005
	M2	56	2.36	0.749	2.8	0.724	Pre-test and post-test	−0.446	1.025	0.137	−0.721	−0.172	−3.258	55	0.002
	M3	56	2.89	0.888	3.29	1.057	Pre-test and post-test	−0.393	1.358	0.181	−0.756	−0.029	−2.166	55	0.035
	M4	56	3	0.786	3.04	0.894	Pre-test and post-test	−0.036	1.25	0.167	−0.370	0.299	−−0.214	55	0.831
	M5	56	3.41	0.987	2.68	0.936	Pre-test and post-test	0.732	1.152	0.154	0.424	1.041	4.756	55	0

*The higher the mean score, the higher the level of misconceptions

*M1= Misconception 1: Recognizing algebraic expression; M2 = Misconception 2: Determining the number of terms in given algebraic expressions; M3 = Misconception 3: Bracket usage; M4 = Misconception 4: Letter usage and conjoin error; M5 = Misconception 5: Negative integers

DISCUSSION AND CONCLUSION

The findings reveal that there is an effect of computerized feedback on students' misconceptions in algebraic expression. After the intervention, treatment group students were having lower misconceptions mean score in post-test than in pre-test for all the misconceptions except for M5. The difference between means is statistically significant for all the misconceptions. Meanwhile, control group students were having higher misconceptions mean score in post-test than in pre-test for all the misconceptions except M5. The difference between means is statistically significant for all the misconceptions, except for M4.

Misconceptions arise when students fail to link new knowledge to previous knowledge for which the brain has established (Lucariello, Tine, & Ganley, 2014). The existence of misconception triggers the occurrence of errors (Smith, Disessa, & Roschelle, 1993). According to Ohlsson (1996)'s theory, there are two phases in the process of learning from errors: (a) error detection and (b) error correction. Learners must be aware of their errors in order to learn from them. If a student never learns what his or her errors are, he or she will never correct them. Before an error can be corrected, it must first be detected. Meanwhile, feedback plays the role of a mentor and informs the students of the error. As reported by Barrow et al. (2008), the number of errors made by students could be reduced by providing feedback to them. It is supported by Marsh (2012) that feedback is useful in correcting students' errors. Therefore, treatment group students were able to identify and correct their errors after reading the feedback presented. In turn, solve their misconceptions and improve their performance.
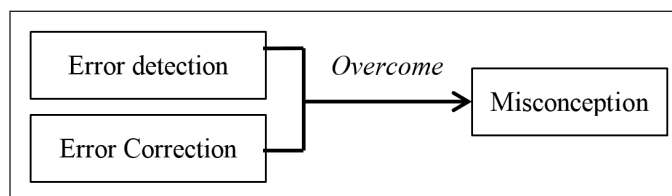
Figure 4. Error and misconception.

This is further supported by Adams et al. (2014) that attending to students' error is helpful to assist them learn from errors and overcome their misconceptions. Similarly, Chen, Hsieh and Hsu (2007) and Lee, Lee and Leu (2009) expressed that feedback allows students to receive useful hints that lead to identification of their misconceptions.

In turn, it provides opportunity for them to solve their misconceptions. A recent study by Lin, Lai and Chuang (2013) supported this. Their findings showed that feedback provided hints that helped students to rectify their misconceptions. Another finding that is in line with this is the study by Cotner, Baepler and Kellerman (2008). They

commented that feedbacks encouraged students to identify and help them to untangle their misconceptions, which might lead to their improved exam performance.

Meanwhile, Leijen et al. (2012) pointed out that feedback enabled individuals to share and learn from others' perspectives, interpret and develop their own perspectives. Then, learners could establish connections between new and existing knowledge, to understand their own position within that relationship and improve it. Therefore, maximize the opportunities for learning and avoid past mistakes. This could be another reason that computerized feedback is effective in resolving students' misconceptions.

Besides, the timeliness of computerized feedback might contribute to its effectiveness in resolving students' misconceptions. In this study, feedback was delivered to students through CBT. The purpose of using CBT as the feedback delivery medium is to present feedback to students in a timely manner. Through CBT, students were assessed and received feedback in a timely manner. According to Mutch (2003), it was important to give feedback to students within certain timelines when it was still meaningful to them. Students who received immediate feedback showed higher response identification accuracy, confidence rating, and memory retention (Brosvic et al., 2005). They appreciated prompt feedback that could reveal misconceptions and convert their mistakes to correct answers (Cotner et al., 2008; Epstein et al., 2002). The finding of this study is also in line with Carter (1984) that the timing of feedback should be

immediate to provide remedial information constantly and avoiding confusion (Siegel & Misselt, 1984).

Nevertheless, among the five misconceptions involved, the effect of feedback on students' misconceptions is inconclusive. The distractors used in the pre-test and post-test are possible answers resulted from misconceptions by referring to literature review and pilot study result, as stated earlier. After the intervention, treatment group students were having lower misconceptions mean score in post-test than in pre-test for all the misconceptions except for M5. Interestingly, control group students were more likely to select responses formed by all the misconceptions in post-test than in pre-test, except for M5. Although the feedback is useful in resolving students' misconceptions, this is invalid for M5: Negative integers. This lightens up the idea that the effectiveness of feedback in resolving students' misconceptions is influenced by the type of misconceptions. The feedback might works differently under certain aspects for different misconceptions. Algebraic misconceptions have been investigated by many researchers and they were being categorized into different groups, such as the meaning of algebraic letters, algebraic expression, negative integers, variables in algebraic, equations, and order of operations (Eccius-Wellmann, 2012; Lim, 2010; Luka, 2013, Perso, 1991). However, algebraic misconceptions are not being assessed and arranged according to their difficulty levels. The inconclusive effect of feedback on students' misconceptions in this

study triggers the idea that misconceptions might differ in terms of complexity or difficulty. Because solving misconceptions involves cognitive process that ranging from low to high cognitive levels, it is reasonable that misconceptions can be arranged or classified according to its difficulty. In the other words, lower cognitive skills needed to solve easier misconceptions and higher cognitive skills are needed to solve harder misconceptions. The findings of this result suggest that M5 is more complex and most difficult compared to the other four misconceptions. Students who possess this misconception were not able to resolve it after receiving the feedback. The reason behind is worth for deeper investigation in future study.

In summary, it can be concluded that there is an effect of computerized feedback on students' misconceptions in algebraic expression. However, its effect varies according to different types of misconceptions in some extent.

Theory Implication

The theoretical framework in this study highlights the role of Ohlsson's theory - Learning from Performance Errors (1996) in explaining the effect of computerized feedback. According to Ohlsson, there are two key components in learning: (a) declarative knowledge and (b) procedural knowledge. Knowing *that* (declarative knowledge) and knowing *how* (procedural knowledge) is distinct. The findings of this study supported this. Control group students received simple computerized feedback

that allows them to know whether their answer is correct or wrong (declarative knowledge). Meanwhile, treatment group students received detailed computerized feedback that not only showing them the correct answer but also showing them the proper solution to solve the question. This helps them to detect their errors and convert their declarative knowledge into procedural knowledge. In turn, they performed better than control group students.

Learners must be aware of their errors in order to learn from them. If a student never learns what his or her errors are, he or she will never correct them. With quality feedback during learning process, valuable information could provide students an opportunity to learn from their errors. As supported by Alphert-Sleight (2003) that learners must have informative task environment in order to detect and correct errors. They learn a skill by detecting and correcting errors while performing the skill.

Attending to students' errors is necessary in improving their learning. As highlighted in the theory, an error only can be corrected after it is detected. Through feedback, it provides opportunity to students to think and reflect their levels in knowledge construction (Aronson, 2011; Duffy, 2009). As supported by Randall and Zundel (2012) that feedback given during learning process can further improve students' performance by providing them an opportunity to learn from their errors. It functions as an error signal to let the students are aware of their errors. While feedback is useful in students' learning, emphasizing error detection and

error correction in feedback makes feedback even more powerful. The results of this study pinpoint the possibility of integrating theoretical knowledge into real classroom practice. As errors play an important role in the effectiveness of feedback, this reminds teachers and educators to emphasize on students' errors when giving feedback. What they did wrong should be pointed out for them to think and understand their errors and avoid past mistakes in the future.

REFERENCES

Adams, D. M., McLaren, B. M., Durkin, K., Mayer, R. E., & Rittle-Johnson, B. (2014). Using erroneous examples to improve mathematics learning with a web-based tutoring system. *Computers in Human Behavior*, *36*, 401–411.

Barrow, D., Mitrovic, A., Ohlsson, S., & Grimley, M. (2008, June). Assessing the impact of positive feedback in constraint-based tutors. In *International Conference on Intelligent Tutoring Systems* (pp. 250-259). Springer, Berlin, Heidelberg.

Black, P., & William, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, *5*(1), 7–75.

Bokhove, C., & Drijvers, P. (2012). Effects of feedback in an online algebra intervention. *Technology, Knowledge, and Learning*, *17*(2), 43–59.

Bridge, P., & Appleyard, R. (2005). System failure: A comparison of electronic and paper-based assignment submission, marking, and feedback. *British Journal of Educational Technology*, *36*(4), 669–671.

Brosvic, G. M., Epstein, M. L., Cook, M. J., & Dihoff, R. E. (2005). Efficacy of error for the correction of initially incorrect assumptions and of feedback for the affirmation of correct responding: Learning in the classroom. *Psychological Record*, *55*(3), 401–418.

Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Psychology*, *65*, 245–281.

Carter, J. (1984). Instructional learner feedback: A literature review with implications for software development. *The Computing Teacher*, *12*(2), 53–55.

Çepni, S., Taş, E., & Köse, S. (2006). The effects of computer-assisted material on students' cognitive levels, misconceptions and attitudes towards science. *Computers & Education*, *46*(2), 192-205.

Chan, S., & Leijten, F. (2012). Using feedback strategies to improve peer-learning in welding. *International Journal of Training Research*, *10*(1), 23–29.

Chen, C. M., Hsieh, Y. L., & Hsu, S. H. (2007). Mining learner profile utilizing association rule for web-based learning diagnosis. *Expert Systems with Applications*, *33*(1), 6–22.

Conroy, M., Sutherland, K. S., Snyder, A. L., Al-Hendawi, M., & Vo, A. (2009). Creating a positive classroom atmosphere: Teacher's use of effective praise and feedback. *Beyond Behavior*, *18*(2), 18–26.

Cotner, S., Baepler, P., & Kellerman, A. (2008). Scratch this! The IF-AT as a technique for stimulating group discussion and exposing misconceptions. *Journal of College Science Teaching*, *37*(4), 48–53.

Denton, P., Madden, J., Roberts, M., & Rowe, P. (2008). Students' response to traditional and computer-assisted formative feedback: A comparative case study. *British Journal of Educational Technology*, *39*(3), 486–500.

Eccius-Wellmann, C. (2012). The need to know algebra skills, misconceptions, misapplications

and weaknesses of students. *China - USA Business Review, 11*(9), 1256–1266.

Economides, A. A. (2006). Emotional feedback in CAT (Computer Adaptive Testing). *International Journal of Instructional Technology & Distance Learning*, *3*(2), 11–20.

Epstein, M. L., Lazarus A. D., Calvano, T. B., Matthews, K. A., Hendel, R. A., Epstein, B. B., & Brosvic, G. M. (2002). Immediate feedback assessment technique promotes learning and corrects inaccurate first responses. *The Psychological Record*, *52*, 187–201.

Felder, R. M. (1993). Reaching the Second Tier--Learning and Teaching Styles in College Science Education. *Journal of college science teaching*, *22*(5), 286-90.

Freeman, R., & Lewis, R. (1998). *Planning and implementing assessment*. London, New York: Kogan.

Gibbs, G. R. (1999) Using assessment strategically to change the way students learn. In Brown, S. & Glasner, A. (Eds.), *Assessment matters in higher education - Choosing and using diverse approaches* (pp. 41–53). London: Society for Research in Higher Education and Open University Press.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, *77*(1), 81–112.

Hattie, J. (2009). *Visible learning*. London and New York: Routledge.

Hiebert, J., & Carpenter, T. (1992). Learning and teaching with understanding. In D. A. Grouws (Ed.), *Handbook of research on mathematics teaching and learning* (pp. 65–100). New York: Macmillan.

Lalor, A. (2012). Keeping the destination in mind. *Educational Leadership*, *70*(1), 75–78.

Lee, C. H., Lee, G. G., & Leu, Y. (2009). Application of automatically constructed concept map of learning to conceptual diagnosis of e-learning. *Expert Systems with Applications*, *36*(2), 1675–1684.

Leijen, A., Valtna, K., Leijen, D. J., & Pedaste, M. (2012). How to determine the quality of students' reflections? *Studies in Higher Educati*on, *37*(2), 203–217.

Lilley, M., Barker, T. & Britton, C. (2005). *The generation of automated learner feedback based on individual proficiency levels*. In Proceedings of the 18th International Conference on Industrial & Engineering Applications of Artificial Intelligence & Expert Systems, *Lecture Notes in Artificial Intelligence, 3533*, 842–844.

Lim, K. S. (2010). An error analysis of Form 2 (Grade 7) students in simplifying algebraic expressions: A descriptive study. *Electronic Journal of Research in Educational Psychology*, *8*(1), 139–162.

Lin, J., Lai, Y., & Chuang, Y. (2013). Timely diagnostic feedback for database concept learning. *Educational Technology & Society*, *16*(2), 228–242.

Lucariello, J., Tine, M. T., & Ganley, C. M. (2014). A formative assessment of students' algebraic variable misconceptions. *The Journal of Mathematical Behavior*, *33*, 30–41.

Luka, M. T. (2013). *Misconceptions and Errors in Algebra at Grade 11 Level: The Case of Two Selected Secondary Schools in Petauke District* (Unpublished Master's thesis), University of Zambia, Lusaka.

Marsh, E. A. (2012). Using verification feedback to correct errors made on a multiple-choice test. *Memory*, *20*(6), 645–653.

Matthews, K., Janicki, T., He, L., & Patterson, L. (2012). Implementation of an automated grading system with an adaptive learning component to affect student feedback and response time.

Journal of Information Systems Education, *23*(1), 71–83.

Mkrtchyan, A. (2011). Distractor quality analyze in multiple choice questions based on information retrieval. *3rd International Conference on Education and New Learning Technologies* (pp. 1624–1631). Barcelona, Spain: IATED.

Mutch, A. (2003). Exploring the practice of feedback to students. *Active Learning in Higher Education*, *4*, 24–38.

Narciss, S., Sosnovsky, S., Schnaubert, L., Andres, E., Eichelmann, A., Goguadze, G., & Melis, E. (2014). *Exploring feedback and student characteristics relevant for personalizing feedback strategies*, *71*, 56–76.

Ohlsson, S. (1996). Learning from performance errors. *Psychological Review*, *103*, 241–262.

Perso, T. (1991) *Misconceptions in Algebra*. Unpublished paper presented at the Fourteenth Annual Conference of MERGA, Hobart.

Robelen, E. W. (2013). Questions arise about algebra 2 for all students. *Education Week*, *32*(35), 1-29.

Russell, M., O'Dwyer L. M., & Miranda, H. (2009). Diagnosing students' misconceptions in algebra: Results from an experimental pilot study. *Behavior Research Methods*, *41*(2), 414–424.

Sanchez-Vera, M. D., Fernandez-Breis, J. T., Castellanos-Nieves, D., Frutos-Morales, F., & Prendes-Espinosa, M. P. (2012). Semantic Web technologies for generating feedback in online assessment environments. *Knowledge-Based Systems*, *33*, 152–165.

Shute, V. (2008). Focus on formative feedback. *Review of Educational Research*, *78*, 153–189.

Siegel, M. A., & Misselt, A. L. (1984) Adaptive feedback and review paradigm for computer-based drills. *Journal of Educational Psychology*, *76*(2), 310–317.

Smith, J. P., DiSessa, A. A., & Roschelle, J. (1993). Misconceptions reconceived: A constructivist analysis of knowledge in transition. *The Journal of the Learning Sciences*, *3*(2), 115–163.

van der Kleij, F. M., Eggen, T. J., Timmers, C. F., & Veldkamp, B. P. (2012). Effects of feedback in a computer-based assessment for learning. *Computers & Education*, *58*(1), 263-272.

Welder, R. M. (2012). Improving algebra preparation: Implications from research on student misconceptions and difficulties. *School Science and Mathematics*, *112*(4), 255–264.

Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice. *Higher Education, 45*(4), 477–501.

The Capsule Living Unit Reconsidered A Utopia Transformed Reality

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ABSTRACT

The purpose of this paper is to seek a better understanding of why solely in Japan the concept of capsule living units has been perceived more than a mere utopia and seems to have "made sense" to a wide cultural audience as a possible housing alternative. For that purpose, a thorough literature review was conducted to bring about comprehensive understandings of this phenomenon through a historical review and a definition of the capsule as presented by the Metabolists in the 1960s, and through a comparison between its fundamentals and the one of its hypothetical ancestral precedent; the Japanese tea-hut.

Keywords: Capsule living unit, capsule hotel, Japanese tea-hut, Kisho Kurokawa, metabolism

INTRODUCTION

One of the solutions that emerged in the architectural discourse in response to the problems of overpopulation, shortage of land, and the increasing densification of cities was the concept for capsule-living units. Experimental proposals relating to such a theory have been presented and argued simultaneously in the West and in the Far East, but only in Japan the concept developed further leading to the creation of an unprecedented typology; the capsule hotel.

It was the Metabolist architects—best known for their manifesto *Metabolism, 1960*—that stressed out the concept's potentials further. The main corpus to their ideology was to perceive the city and architecture as changing continuously and growing organically, borrowing the metaphor from biological processes that creatures undergo throughout their life (Kawazoe, 1960). With the analogy of the living cell, the concept of the capsule-living unit was to become one of their core principles alongside a penchant for megastructures and a search to create symbolic spaces.

While the founding members of the Metabolist movement[1] were beginning their careers and all set to become prominent figures of Japan's architectural scene, their early works need to be understood in the context of the post-war recovery and the building boom that resulted from it. The specific concerns for the Metabolists were then primarily with mass housing issues (Cachola, 2005) and four members of the group in particular—Asada, Ekuan, Kikutake and mostly Kurokawa—orientated their research toward the capsule-living unit as a potential alternative to mass produce housing.

METHODS

For the purpose to explore why such concept succeeded to transform from a mere utopia into a sustainable reality solely in Japan, first the genesis of the concept in Japan up to Kurokawa's capsule declaration as published in 1969 is being reviewed. Through such review, the main theoretical characteristics and fundamental components of the concept as presented by the Metabolists are clarified. Second, the fundamentals of the Japanese tea-hut are considered through a review of Okakura Kakuzo's *The Book of Tea* (1906), a treatise that reflects on all elements of the tea ceremony and particularly the architecture of the tea-hut (Treen, 2011). Third, the fundamentals for both are compared in cross-reference (Table 1) and then similarities and contradictions are presented. Finally, the significance of the Japanese tea-hut as the capsule's hypothetical ancestral precedent is discussed. According to Groat and Wang (2002) good treatises found their acceptance because they "make sense" to a wide cultural audience as the representative summary of that culture's worldview relative to aesthetic values. As such, it is fair to assume that innovative architectural proposals find acceptance because they are accepted as "logical" within the cultural milieu they are presented in. The discussion that follows aims to provide an insight of such phenomenon for the capsule-living unit in Japan: a utopia that transformed into a reality.

LITERATURE REVIEW

Early Capsules Experiments and Prototypes

Japanese scholars suggested that the feasibility of using industrialized capsules was demonstrated at first with the Syowa station for the Soya expedition to Antarctica designed by Asada Takashi in 1956 (Figure 1). According to Saikaku (2011), this temporary shelter was *"Japan's first serious attempt to create industrialized housing."* Because the Syowa station had to be shipped to site and erected in extreme weathered conditions,[2] Asada developed together with *Misawa Homes[3]* an innovative prefabricated construction system applied for housing

[1]The Metabolist group was co-founded by Kawazoe Noboru, Awazu Kiyoshi, Kikutake Kiyonori, Kurokawa Kisho, Otaka Masato and Maki Fuhimiko in preparation of the Tokyo World Design Conference in 1960. They were joined soon after by Asada Takashi and Ekuan Kenji.

[2]The Syowa station was constructed in Antarctica where temperature go below 50 degrees centigrade and wind up to 240 kilometres an hour.
[3]Misawa homes, a prefabricated home maker, was directly contracted to handle all construction and is now a dominant corporation in this field.

purposes. If the introduction in Japan of such construction methods was arguably the main inspiration for the capsule-living unit, certainly it did provide the necessary

technical framework that catalyzed its creation and can be thought of as one of its core characteristics.

Figure 1. Syowa Station by Asada, 1956

It is also believed that Ekuan Kenji's early works were instrumental in defining the theoretical context that brought their group to develop the concept further. In *Research into existing forms of living space and the development of new forms more suitable to contemporary society* (1965), Ekuan presented a radical shift of perspective[4] considering architecture as a piece of equipment instead of architecture as a constructed environment (Ekuan, 2014). He also emphasized the use of

mass produced prefabricated modules that were to be freely combined and arranged with maximum flexibility to answer the needs for personalization. In conclusion, he envisioned the capsule-living unit to be a significant model for new forms of living space more suitable to contemporary society even though he did realize only a few notable prototypes (Figure 2).

On Ekuan's foot-steps, Kikutake Kiyonori did experiment similar principles applied to mega-structures. The first large-scale capsuled housing scheme was presented as part of his *Marine City* in 1963 (Figure 3). This proposal was based on the idea that units would be craned up

[4]In the 1960s, industrial design was not yet recognized a profession in Japan hence Ekuan took the initiative of his own work to architecture as a mean to boost his career. Kenji Ekuan in an interview by the author, Tokyo, 2015.

Figure 2. Ski lodge by Ekuan, 1962

and plugged onto a main core and would keep on growing overtime with the arrival of new families (Mori Art Museum, 2011). Units would be replaced every 20 years and smaller living equipment—kitchens, bathrooms, or bedrooms—could be easily added, relocated, replaced, or removed to meet the evolving needs of the residents or advances in technologies. Now if Kikutake's ambitious experiments extended further the capsule debate, none of his capsuled schemes were ever realized.

From the four main protagonists, no one more than Kurokawa Kisho embraced the ideology of the capsule to the point that in the late 1960s he was often referred to as the "capsule architect." He received the pioneering proposals by Asada, Ekuan, and Kikutake and admirably assimilated these into his own work. Although he was not its inventor, he more or less patented the concept of capsule architecture (Jencks, 2013).
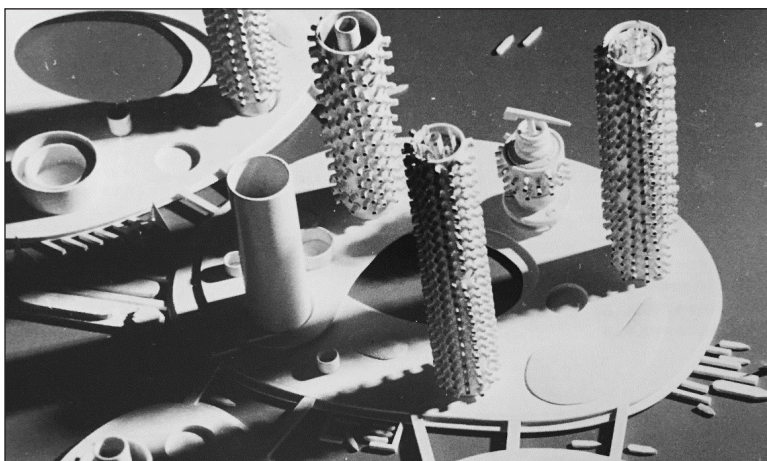
Figure 3. Marine City by Kikutake, 1963

The "Capsule Architect" and His *Capsule Declaration*

Kurokawa was equally inspired by his first publication *Prefabricated House, 1960*[5] that summarized his research on existing prefabricated construction systems for housing overseas. This publication was then in Japan an important contribution to the topic. Kurokawa was a fervent critic of how prefabrication processes were developed in order to only lower cost and shorten the period of construction (Kurokawa, 1977). His capsules instead were to produce a qualitative change in that the different parts could be replaced, similarly to Ekuan's and Kikutake's principles. Such a system—he termed a selective mass-production system—sought to achieve a plurality of combination and hence to suggest a diversified society in protest to the uniformity of modern cities (Kurokawa, 1992).

Kurokawa theorized further pointing to the disintegration of the traditional family system (based on the married couple) and its replacement by an entirely new family centered on individuals (Kurokawa, 1977). Kurokawa finally synthesized his theorization of the capsule in the *Capsule Declaration,* a paper he published in 1969. It consisted of eight points summarized as follows:

- The capsule is architecture as equipment: it is cyborg architecture and an extension of man.

- The capsule is detached from ground: it stands for the emancipation of a building in relation to the ground so that to adapt to the high mobility that became a pattern of life.

- The capsule is a protest against the norm: it suggests a diversified society and the protest of individuality against unification.

- The capsule is the creation of a new form of living: it intends to institute an entirely new family system centred on individuals (based on the assumption that the family system based on married couple will disintegrate).

- The capsule is for urbanites: its dwellers belong and satisfy their inner spiritual requirements in the heart of the megalopolis.

- The capsule is a refuge for the mind: it is a protective shield against information overload allowing an individual to recover his subjectivity and independence.

- The capsule is prefabricated: it is the ultimate form of a prefabricated building.

- The capsule is a protest against uniformity: it is architecture opposed to the uniformity of the modern city.

The Capsule Declaration's great importance was to crystallize a philosophical background to the concept; Kurokawa's capsule after all had been envisioned as a tool with which man could assert his

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[5]*Prefabricated House* was first published by Kurokawa in 1960 and re-edited with Noboru Kawazoe in 1964.

individuality and freedom, a revolution in itself in a society that is reputed for being the most conformist in the world (Jencks, 2013).

We find the first capsules in Kurokawa's work in *Prefabricated Apartment House* in 1962. If the scheme's main focus remained on a more conventional prefabricated construction method to produce apartment units, it also featured plugged-in bath units intended to be adaptable according to the occupant tastes and needs. That scheme was never realized and it took him 8 more years before he could complete his first prototypes, notably his *Takara Beautillion*[6] and the *Mid-Air Capsule* (Figure 4) for the Osaka World Exhibition in 1970.[7]

[6]Kurokawa collaborated with Kenji Ekuan for this pavilion. The prefabricated structure was complete in one week and later dismantled in only 2 days. See *Metabolism, the city of the future*, Shinkenchiku-sha Co., Ltd, Tokyo, 2011, p. 202

[7]Kurokawa was appointed four pavilions at the Osaka World Expo that provided an ideal stage for Metabolists to realize some of their earliest dreams and inventions. See *Metabolism, the city of the future*, Shinkenchiku-sha Co., Ltd, Tokyo, 2011, p.183

The *Mid-Air Capsule* in particular was a full-scale model of a home for the future and was the ultimate realized version of Kurokawa's *Capsule Declaration*. The prefabricated individual units—all equipped with a single bed, a private kitchenette, and an integrated unit bath—were plugged onto an information core equipped with the latest broadcasting technologies that came in replacement of the standard living room. Soon after Kurokawa's research culminated with the realization of his notorious *Nakagin Tower (1972)*, the first capsule building realized for actual use. Kurokawa then developed a system where the units were detachable and replaceable. They were fully fabricated at factory (modified from shipping containers), transported at site by trucks and lifted in place by crane. It consisted of 144 units fully furnished that were all assembled onto a reinforced concrete core in less than a month.[8]

[8]All works at Nakagin were finished in 30 days. See *Project japan, metabolism talks ...,* Taschen, Spain, 2011. p. 388
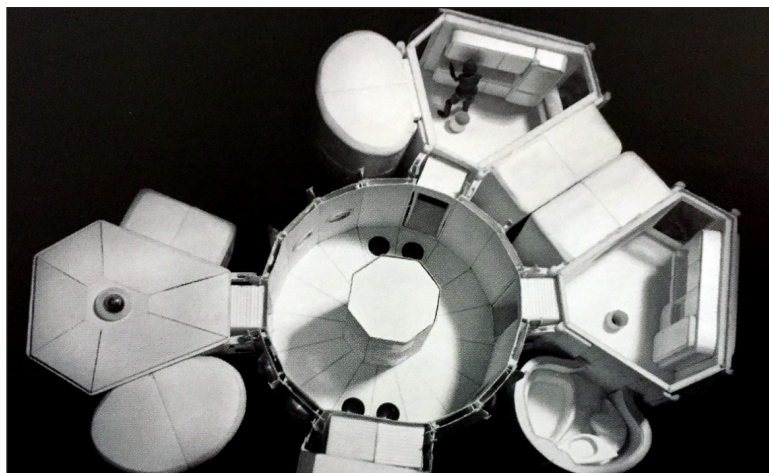
Figure 4. Mid-Air Capsule by Kurokawa, 1970

The *Nakagin* was a true success since all units were sold within a month of launching and later became an icon for the Metabolist movement.[9] It was equally a true failure as none of the capsules have ever been replaced over 40 years and thus remained a prototype. In summary, it failed to create the new tradition it intended to.

A Model that Proved the Correctness of the Capsule Analysis

A follow-up of the capsule theme was to be found in an unprecedented typology that demonstrates the correctness of the capsule analysis. The first ever-realized capsule hotel was completed in 1979, the *Capsule inn Osaka* (Figure 5), not surprisingly a Kurokawa design again. Kurokawa converted an existing building—previously an apartment building—into a hotel fitted with 410 capsules. The hotel is still operating today. The particularity of the sleeping capsules is their absolute minimal

[9]The Nakagin has been listed as an architectural heritage by Docomomo since 2006. See www.kisho.co.jp

dimensions—each capsule is 950 mm high, 950 mm wide, and 1,910 mm deep—and despite this very limited space, they are all fully equipped with built-in mini television, radio, and alarm clock. According to their web page (2016) guests have also access to various facilities including locker rooms, showers, restaurants, vending machines and have on offer a wide range of body treatments (saunas, Jacuzzi, an indoor pool, outdoor baths, and all types of massages). According to Nakano (2015)—manager and grand-daughter of the founder—this whole new style of accommodation was created with the idea of making the sleeping space extremely compact while providing customers with the comfort and services of luxurious hotels.

Such hotels became very successful even though their popularity remained vested for decades with salary men who missed their last train home—the target group for which they were originally conceptualized. However, we recently notice a shift of services and designs attracting

Figure 5. Capsule Inn Osaka by Kurokawa, 1979

now travelers seeking exotic experiences or again design enthusiasts (Figure 6). While the model has now reinvented itself entering a second generation of use, there are capsule hotels all around the country and the concept even started to spread worldwide.[10] This unprecedented typology that originated with the Metabolists' vision for the capsule-living unit has since become a true icon for contemporary Japan and successfully transformed from a mere utopia to a sustainable reality.

[10]With facilities launched in Australia, Singapore, Thailand, Malaysia, India, China, Russia and certainly many more to come.

Figure 6. 9-hour Capsule Hotel Kyoto, 2015

An Ancestral Precedent for the Capsule-Living Unit

If Saikaku's thesis posits the Syowa station as the main inspiration for the model of the space capsule living units, the Metabolists preferred instead to refer to the Japanese traditional tea-hut. Kurokawa, for example, utilized the ideal floor size of a tea-hut (4.5 *tatami*[11] mats) for all capsules at the *Nakagin Tower* and the *Capsule House K*, a private summer residence he designed and built for himself in 1973. There he even inserted the reconstruction of a 17th century style tea-ceremony room in one of them (Figure 7). According to Jencks (1976), proportions for all built-in furnitures both at *Nakagin* and *Capsule House K* were also based on ancient conventions and Kurokawa here again was traditional when we may have thought he was most futurist.

Not only Kurokawa utilized *tatami* proportions, but also Ekuan (1998) literally described his capsule as no less than a prime model of a tea-hut for the future. According to Kurokawa Masayuki[12] (2015), the ancestral archetype of the tea-hut was conceived from a conflicting relationship between the supreme tea master *Sen-no-Rikyu* (1522–1591) and the lord *Hideyoshi Toyomi* (1537–1598) who was the imperial regent of Japan from 1585 to 1591. *Rikyu*—who was a merchant class descent, the lowest cast in Japan—was teaching the art of the tea ceremony to *Hideyoshi*—the

[11]1 *tatami* mat is roughly 3 feet × 6 feet

[12]Younger brother of Kurokawa Kisho

highest ranked individual at the time. While *Rikyu* was a man of simple taste ("Sen no Rikyu", 2015) this conflicting relationship brought him to create the *Tai-an*, the first

ever-realized Japanese tea-hut[13] that was originally built in *Hideyoshi*'s castle in Yamazaki in 1583 (Mahiques, 2011).

[13]The *Tai-an* is the oldest tea-hut and one of only three in Japan designated as national treasures (Mahiques, 2011)

Figure 7. Reconstruction of a 17th century style tea-room *Capsule House K,* 1973
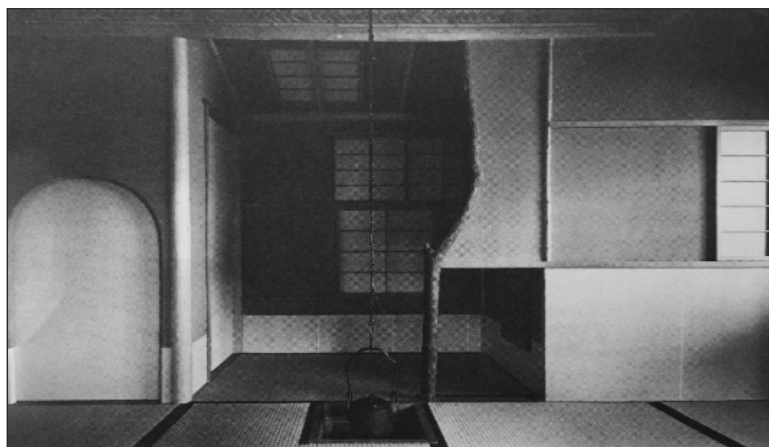
Figure 8. Kurokawa's own tea room *Yuishikian (hut of Consciousness-Only)*

The fundamentals of the tea-hut were based on the principles of simplicity, purity, and the minimization of space *Rikyu* posited in contradistinction with the opulence of the architecture of the lords. Its true significance

stands in the creation of an unprecedented tradition associated to an aesthetic of refined poverty that has now generally been considered the epitome of Japanese aesthetic (Kurokawa, 1988). The main

characteristics of the traditional Japanese tea-hut as described in Okakura Kakuzo, *The Book of Tea (1906)*[14] are summarized into the following six points:

- The tea-hut is a temporary refuge for the body (based on Buddhist theory of evanescence).

- It is a protection from the vulgarity of the outer world (manifest through purism and simplicity).

- It is a protest against the distinctions of the class system.

- It is the creation of a new tradition (transferred since the 16th century up to the present day).

- It is smaller than the smallest of Japanese houses.

- It is an ideal of refined poverty (and unimpressive appearance).

On a technical ground, most construction elements of *Rikyu*'s *Tai-an* were also prefabricated, carried to and assembled at site. Thus, it can as well be perceived a precursor of industrialized construction methods. These techniques were later translated to vernacular houses and some of them even massed-produced. Sliding screens, posts, walls, and windows, for example, are still today produced on the ancestral standardized proportion system of the *tatami* mat that underlies most of Japanese buildings (Jencks 1976).

Aside from the evident metaphor that permitted the Metabolists to culturally connect their works to past traditions,

[14]A classic essay on the role of the tea ceremony in Japanese aesthetic

the capsule main characteristics must be reviewed in comparison with the fundamentals of the Japanese tea-hut to analyze further their correlation.

Analysis of Similarities and Contradictions between the Capsule and the Tea-Hut

The narrative for the concept of the capsule-living unit was certainly charged with technocratic traditions inspired in particular by the recent space travel breakthroughs that climaxed with the *Apollo11* mission to the moon (1969).

However it is believed that its fundamental ideology was deeply rooted to the ancestral model of the tea-hut and that in such a nexus could stand an explanation as to why the model has been successful solely in Japan.

According to the set of relationships identified in the tabulation below, we can trace various similarities and contradictions between the two models. It is sensitive to foresee that most contradictions lie in principal with new technologies that were introduced in the periods that separate them, and in particular during the industrialization and modernization of Japan.

First, the shift of materiality is evident in the use of steel and/or fiberglass in place of traditional timber structures, tatamis, and thatched roofs. Ekuan's vision toward architecture as equipment was also in response to the creation of industrial design and the strong influence this had on the field of architecture. Also, the notion of flexibility needs to be understood with

the purpose to tailor products in a mass consumption society to answer the needs of personalization. This, however, could arguably recall memories of the tea-hut since when being constructed with all sorts of standardized elements some other parts were also customized. In particular, the *nakabashira*, a naturally crooked timber pillar was located right at the middle of the tea-hut. Traditionally, the tea master went to the mountain and search for a *nakabashira* specifically for that particular hut to symbolize the spirit of its master (Kurokawa, 2015).

Table 1
Characteristics of capsule-living unit concept in comparison with the Japanese tea-hut

Characteristics	Metabolic group early research and experimental works	Kurokawa' Capsule Declaration & experiments	Capsule hotel	Traditional Japanese tea-hut
Flexible	o	o	o	
Architecture as equipment	o	o	o	
Prefabricated	o	o	o	o
Detached from ground	o	o	o	o
The creation of new form of living	o	o	o	o
A protective shield	o	o	o	o
A protest against the norm	o	o	o	o
Compact		o	o	o
An ideal of refined poverty				o

Besides what is shown in Table 1, numerous similarities are also readable. If the tea-hut eventually can be seen a precursor for prefabricated construction methods, both models certainly correlate with their minimized proportions, their detachment from ground, and their ambition for the creation of a new form of living and a protest against the norm. In regards to the notion of a refuge, the capsule was designed to protect its occupant from information overload while the tea-hut also attempted to protect from the vulgarities of the outer world.

But above all, the Metabolists engaged with the capsule typology in a form of protest of the individual against the uniformity and globalization of the modern era as penned in Kurokawa's *Capsule Declaration*. Alike *Rikyu*'s conflicting relationship with the lord *Hideyoshi*, the Metabolists conceptualized the capsule to protest against the limitations of a bureaucratic ruling class that still maintained a strong control over Japan's society and indirectly the development of its future cities. The capsule architects were attempting to design the city through a reevaluation of

the significance of individuals and advocate for a better democracy. Alike the tea-hut of *Sen-no-Rikyu* that had been a form of moral resilience toward the establishment, the capsule concept is showing similar ambitions and this is here in retrospect that the link between the two is the strongest.

CONCLUSION

It is noteworthy to also recall here Rem Koolhaas' own interrogation in regards to the unique Japanese cultural trait that combines at the same time modernity and traditions central to the hypothesis of this paper:

> *'Yet what's puzzling for me is the combination of being extremely modern and radical on the one hand, and so completely dependent on or related to tradition on the other. It's a combination that exists only in Japan, as far as I can see, I've never seen anyone in any other culture claim modernity and at the same time claim tradition and history'* (Koolhaas, 2011).

Kurokawa (1997) also pointed out that all traditions were composed on one hand of what he called the visible traditions—styles, ornaments, or again symbolic representations—and on the other the invisible traditions: ideas, philosophies, aesthetic sensibilities... According to him, Japanese culture in particular transmits its traditions with greater stress on its spiritual aspects rather than on physical objects. The modus operandi to transmit invisible traditions through contemporary architectural forms was to become a pillar of Kurokawa's theory. Such a method is also perceptible in the capsule-living unit as demonstrated above and it is here that we may find the explanations as per why it has been successful solely in Japan through the creation of the capsule hotel typology. Even though the capsule-living unit appeared at first rather alienating, it is believed that it had been conceptualized as an invisible tradition in continuity of the tea-hut explaining why in Japan it has been accepted by the public and so transformed from a mere utopia into a reality!
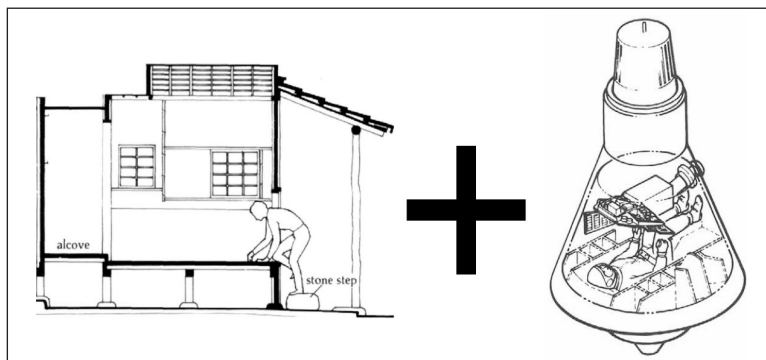
Figure 9. Space travel capsule and Japanese tea-hut, the true inspirations for the capsule living unit

REFERENCES

Cachola, P. S. (2005). *Capsule architecture, revisited*. In P. S.Cachola, I. Flagge and J. Visscher (Eds.). *Kisho Kurokawa, metabolism and symbiosis* (pp. 64–73). Berlin: DAM.

Capsule Inn Osaka. (n. d.). New Japan Umeda. Retrieved November 16, 2016 from http://www.capsulehotel-inn-osaka.com.

Ekuan, K. (1965). *Research into existing forms of living space and the development of new forms more suitable to contemporary society*. (Unpublished raw data).

Ekuan, K. (1998). *The aesthetics of the Japanese lunch box*. Cambridge, MA: The MIT press. (translated by Don Kenny) (edited by David B. Stewart)

Ekuan, K., C., & Gibert, M. (2014). *Interview with Kenji Ekuan*. (Unpublished raw data).

Groat, L., & Wang, D. (2002). *Architectural research methods*. Indianapolis, IN: John Wiley.

Jencks, C., & SCI-Arc Media Archive. (June 24, 1976). *Charles Jencks Recent Italian and Japanese Architecture*. Southern California Institute of Architecture.

Jencks, C., & Gibert, M. (2013). *Interview with Charles Jencks* (Unpublished raw data).

Kakuzo, O. (1906). *The book of tea*. Tokyo: Tuttle publishing (reprint 1956).

Kawazoe, N., Kikutake, K., Otaka, M., Maki, F., & Kurokawa, K. (1960). *Metabolism/1960, the proposals for new urbanism*. Tokyo: Bijutsu Shuppansha.

Koolhaas, R., & Ulrich, O. H. (2011). *Project japan, metabolism talks*. In Kayoko Ota, James Westcott & AMO (Eds.). Spain: Taschen.

Kurokawa, K., & Jencks, C. (1977). *Metabolism in architecture*. London, UK: Studio vista.

Kurokawa, K. (1992). *The will for the 21st century, from the age of the machine to the age of life* (Unpublished manuscript). Tokyo: KKAA.

Kurokawa, K., Knabe, C. & Noenning, J. R. (1997). *Shaking the foundations, Japanese architects in dialogue* (Ed). Berlin: Perstel, p. 25

Kurokawa, K. (1997). *Each one a hero, the philosophy of symbiosis*. Tokyo: Kodansha International.

Kurokawa, M., & Gibert, M. (2014). *Interview with Kurokawa Masayuki* (Unpublished raw data).

Mahiques, M. (2011). *The ceremony of Tea and Taian Teahouse*. Retrieved January 16, 2016 from http://worldarchitecture.org/architecture-news/heff/the-ceremony-of-tea-and-taian-teahouse.html

Mori Art Museum (Eds.) (2011). *Metabolism, the city of the future*. Hirose Mami, Sasaki Hitomi, Maeda Naotake, Tagomori Miho, Tamayama Ami, Yoshida Yuri, Yoshida Ayako (Eds.). Tokyo: Shinkenchiku-sha Co., Ltd.

Nakano, Y., & Gibert, M. (2015). *Interview with Yoshie Nakano*. Kuala Lumpur: University Malaysia (unpublished).

Saikaku, T. (2011). *Cold climate Housing Research and the Syowa Station Building in Antarctica: Asada Takashi and the beginnings of Capsule architecture*. In Mori Art Museum (Ed.). Metabolism, the city of the future (pp. 234–241). Tokyo: Shinkenchiku-sha Co., Ltd. (Translation: Nathan Elchert).

Sen no Rikyu. (2015, September 6). *New World Encyclopedia,* Retrieved January 16, 2016 from http://www.newworldencyclopedia.org/p/index.php?title=Sen_no_Rikyu&oldid=990376.

Treen, K. (2011). *The book of tea*. Retrieved January 16, 2016 from http://www.theguardian.com/books/2011/sep/11/book-tea-kakuzo-okakura-review

PERTANIKA
JOURNALS

Transforming Informal Workers' Assets into Their Livelihoods: A Case Study of Garment Workers in the Lao PDR

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ABSTRACT

This article examines how informal workers are transforming their assets (social, human, financial, physical, and natural) into their livelihoods. This phenomenology study in Lao PDR is increasingly informality of household employment in the garment sector. Using a qualitative method, data were collected through in-depth interviews of 15 home-based garment worker representatives of three groups, including kinship workers, local workers, and post-industrial workers. Content analysis was performed using the ATLAS.ti program for categorization, summarization, and synthesis. The study found that social, human, and financial assets were significant of informal workers transformed into their livelihoods. It is, therefore, considered the capability workers transformed the asset process in accumulation into their meaningful livelihoods. The results suggest that employability can be further enhanced via social, human, financial, and support the physical and natural assets are discussed.

Keywords: Assets, garment workers, informal workers, Lao PDR, livelihoods

INTRODUCTION

Lao PDR introduced the New Economic Mechanism (NEM) in 1986, with the objective of shifting from a centrally planned to a market-oriented economy (Tachibana, 2014). The primary aim of NEM is to improve the informal worker capability, and it became a springboard to promoting employment in the country's

garment sector. According to Nolintha and Jajri (2016), there are 120 garment factories in Lao PDR, of which 45% produce goods for export, 30% subcontractor factories, and 25% produce goods for the domestic market.

In 2000, employed garment workers numbered approximately 28,000, before increasing to 30,000 by 2004 (Sakurai & Ogawa, 2006). In addition, the minimum wage of garment workers in Lao PDR is about ₭569,000 per month ($71) (World Bank, 2012). The number of the garment factories decreased from 120 to 89 in 2009, employing a total of 19,540 workers. Thus, as Rasiah, Nolintha and Songvilay (2011), and Vixathep (2011) report, 10,460 garment workers returned to their homes to work in subcontracted jobs. These workers are employed at home in peri-urban areas of Lao PDR (Phouxay & Tollefsen, 2010).

However, informal workers employed at home are only earning incomes for a living, while agricultural activities are not their options for securing of occupations (Daovisan & Chamaratana, 2017). The central government has initiated a development program to improve labor skills, human resources, and quality of life (MDGs Progress Report Lao PDR, 2013). The implemented program has covered both informal and formal workers, which has faced difficulties in practice of household sectors (Government of Lao PDR & UNDP, 2006). In order to this policy battle against low labor skills, incomes, and quality of life (Daviau, 2010).

Since the decline of the garment sector in 2009, many workers have been pushed into a home-based subcontracted job between workers and garment sector. The structure of employment is, thus, changing for industrial workers, who find themselves working in their homes. Moreover, informal employment in Lao PDR is a poor livelihood, and low employability process between informal workers and the garment sector. These workers are unable to access job training or any other support from the government, causing extensive livelihood insecurity among them (Devereux, 2001). In addition, as Wiseman and Brasher (2008) highlight, informal workers with low capability to transform their assets might face great difficulties in securing their livelihoods.

Many of Lao PDR's informal workers lack diversity in transformation the assets undertaken economic shock, seasonality, and vulnerability. Nolintha and Jajri (2016) recently explored that households were transformed the technology capabilities crucial to an employment activity into their livelihoods. Stephen (2005); Daovisan, Promphakping and Chamaratana (2018) identified the importance of the transformation which resulted in a variety of domain-asset accumulation is utilized to livelihood outcomes. Arun, Arun and Devi (2011) also highlight that transformation assets into their meaningful livelihood was processed of asset accumulation at the grassroots of household levels.

Therefore, this study's main aim is to explore how Lao PDR's informal workers are transforming their assets into their livelihoods. The characteristics

of transformation the assets—social, human, financial, physical, and natural—via employability can draw on towards achieving livelihood outcomes. In order to utilize of household levels are mutually encouraging of kinship, local and post-industrial workers. In the context building on the transitional area in Danexang village, Xaythany district, Vientiane.

LITERATURE REVIEW

Social Assets

The central premise of social assets is that transformed the bonding, bridging and linking into their livelihoods (Bourdieu & Wacquant, 1992; Putnam, 1995; Scoones, 1998). First, it offers a bonding is transformed the trust, cooperative work and share social identities. Second, it involves of bridge is transformed the building of a connection between heterogeneous, group and members. Finally, it enhances the linking is transformed the norms, culture, and engagement. As prior reviews posit, social assets transform the relationship of group interaction via shared culture and norms to create employment networks (Portes, 1998). Woolcock and Narayan (2000) highlighted that the mechanisms underlying social assets were trust, engagement, participation, ties relationship and networks the ability to alter preferences.

Human Assets

Human assets are usually accumulated to transform knowledge, skills, experiences, and abilities into livelihoods (Luthans & Youssef, 2004). According to Becker (1962)'s seminal contribution, human assets are transformed the capability, education, and skill reveal their ability. Davidsson and Honig (2003) analyzed optimizations to transforming the human assets were accumulated the capability of labor for production to produce their incomes. Bebbington (1999) extended this analysis focusing on human assets are linked to their capabilities (knowledge, skills, and training) to motivate (employment activities) their leads livelihood.

Financial Assets

Fnancial assets are transformed the accumulation of income, income, debt, credit, and consumption into livelihoods (Auty & Kiiski, 2004). Indeed, Su and Shang (2012) transformed the employment activity (wages) were inflowing (incomes) collects a stock (saving) encompassing the livelihoods. In this regard, transforming accumulated financial assets also enables selling labor from their capability to cash incomes. Closely linked to this, Ali, Ahmad, Shahbaz and Suleri (2007) highlighted that employment activities were significantly of worker incomes (amount of money) credit (loan) may increase a means of living.

Physical Assets

Physical assets are transformed an accumulation of (infrastructure, road, and transportation) into their livelihoods (Pearce, 1988). The notion of physical assets, which most commonly comprise the housing (machinery and electricity), tends to create

informal employment activities (Erenstein, Hellin, & Chandna, 2010). According to Tran and James (2017)'s review of the main studies on this subject, transforming public services (labor fund, health, and welfare) has given rise to livelihoods. Across this literature, Avogo, Wedam and Opoku (2017) transformed the durable goods and social resources had played key roles in driving employment growth.

Natural Assets

Natural assets include natural resources and stock (forest and land), geophysical (goods and services), and the ecosystem (biodiversity) (Barbier, 2011; Holling, 1993). Besides, it is importation to choose the most appropriate of informal workers. DesRoches (2015); Faruqee and Husain (1996) highlight that natural assets were immutable resource that satisfied basic needs. To an extent, the process of transforming natural assets are accumulated rising environmental services both public and private sector can access, in fact, the stock is diversified (Barbier et al., 2011; Costanza & Daly, 1992).

METHODS

This study employs a qualitative method (Denzin & Lincoln, 2005). Purposive sampling (Coyne, 1997) was used to select 15 key informants among informal home-based workers in Danexang, Xaythany, Vientiane. During each one-to-one in-depth interview, the following questions were posed: "Who are invited you come to employ in this household?"; "Which of your capabilities are important for sewing cloth?"; "How can you earn income from your employment?"; "Do you use any types of machinery to help you sew?"; "Do you ever have access to the natural stock in this village?"

Each in-depth interview lasted for 30 to 40 minutes, and was audio-recorded. The interviews were first transcribed into Lao language and then translated into English. Approval for field-based research involving human participants was obtained from Khon Khaen University Declaration of Helsinki No HE593008 (KKUEC 4.3.02: 3/2016). Verbatim transcription data were subjected to content analysis to form condensation, code, categorize, and synthesize (Erlingsson

Table 1
Characteristics of key informants

KIs	Age	Marital status	Employment types	Experience (years)	Piece rates (tailors)	Income per day ($)
Lek	37	Single	Post-industrial	8	150-200	10-12
Saeng	32	Single	Post-industrial	6	150-200	10-12
La	40	Marriage	Post-industrial	10	200-250	13-15
Thong	45	Marriage	Post-industrial	15	250-300	15-17
Noi	31	Single	Post-industrial	9	200-250	12-15
Donh	27	Married	Local	18	250-300	15-16

Table 1 *(continue)*

KIs	Age	Marital status	Employment types	Experience (years)	Piece rates (tailors)	Income per day ($)
Doung	30	Single	Local	7	90-100	9-10
Ging	28	Married	Local	10	70-80	7-8
Vonh	26	Single	Local	4	80-90	8-9
Hat	55	Married	Local	25	250-300	15-17
Onta	28	Single	Kinship	4	90-100	9-10
Som	29	Single	Kinship	5	80-90	7-9
Thongsy	40	Married	Kinship	12	200-250	12-15
Vanh	28	Single	Kinship	5	150-200	10-12
Ny	45	Married	Kinship	16	200-250	14-15

& Brysiewicz, 2017). The first step of data analysis was performed using ATLAS. ti (student license 1.0.50). In Table 1, we present the characteristics of the key informants who participated in the study.

RESULTS

Social Assets

Informal workers' social assets are transformed into two types—bonding and bridging into their livelihoods. First, the bonding social asset is transformed with closed groups (ties relationship), often leading to the creation of employment activities. Second, the bridging social asset is transformed a loose network between members, and supports encourage of employment activities. One participant explained:

> *"I'm a post-industrial worker, I have ever seen employed in garment factory and then I returned to employment at home with my friend..."* (Lek, a post-industrial worker)

Although participant is appreciative of friend network linked between industrial and household employment activities. Participation in a network may potentially play an important role of ties relationship with increasing returns to employ at home. This reason is similarly of two workers left from garment and textile factory to work-to-family. Two participants noted:

> *"I was born in this village, it's a real I considered returning to employment at home living with my family. When I was employed in the garment factory, it was difficult to practice with regulation and freedom to work..., for example, they said 'no absence and no sick leave...''* (Seang and La, post-industrial workers)

As these two participants noted, the place of employment is created network with ties relationship to work-to-family. Thong and Noi, also post-industrial workers, echoed this sentiment: "I changed from salaried to piece rates, payment at home,

because I worked and lived with my family." On the whole, both participants suggest that more network enhances mutual ties relationship by increasing returns at employ at home.

Haman Assets

The findings indicate that informal workers' human assets are transformed skills into their livelihoods. The accumulation of human assets raises capabilities in employment activities. In addition to providing-driven the informal workers of being employed at home. As one participant explained:

> *"I was a farmer before I changed to employment in the garment sector at home. I learned to sew from my employer. They taught me only two I can sew..."* (Donh, a local worker)

By contrast, Doung explained that "we learn to sew from industrial trainers; they trained us as a part of piece rate, for example, neck, leg and hand, side and zip shirt." As Ging and Vanh, echoed, "we can sew a jacket for about 50-70, but for T-shirts the piece rate is more than 100-150 per day." Participants thus transform their skills and employability into their livelihoods.

Financial Assets

Informal workers' financial assets are transformed the incomes into their livelihoods. The result on the determines of informal workers at home is highly employment status and higher incomes

generation livelihoods. One participant actively endeavors to enhance their income activities, as expressed in the following comment:

> *"I provided my income in three levels—a rainy season only 100,000 ($12); a summer season only K120,000 ($15); and a winter season is about K136,000 ($17) per day..."* (Hat, a local worker)

Similarly, Onta (a kinship worker) noted, "I earned income from selling labor…I can make about K72,000 ($9) per day." Ging, a local worker, stated, "I earned piece rate income of only K57,000 ($7) per day." This further reveals that informal workers are highly employment status via capability through generations of incomes have diversified livelihood activities. Participants alluded to the fact that informal workers are transformed incomes from employment activities into their livelihoods.

Physical Assets

The following characteristics are found that informal worker transformations the physical assets (machinery) into their livelihoods. Responses to the in-depth interviews indicate the importance of machinery for sewing cloth. As one participant described:

> *"I use three types of machinery: (i) 20-U for sewing jackets, (ii) 21-U for sewing a regular T-shirt, and (iii) 22-U for sewing children's clothes..."* (Vanh, a kinship worker)

Saeng, a post-industrial worker, also emphasized the role of machinery: "I use two types for sewing, because that is different side to sew the cloth: for instance, I use a one-needle lockstitch machine for sewing a T-shirt and a two-needle double chain-stitch machine for sewing jackets." These findings highlight the potential for informal workers to transform machinery into their livelihoods.

Natural Assets

Informal workers' natural assets has transformed the land into their livelihoods. We found that the land has not a sign of informal workers comprised both used and access to enhance their livelihoods in employment activities. On this point, one participant explained:

> *"I have only 0.2 hectares for building my house in the village, you know, the land values are very expensive for pricing, I can't think to buy about it, a further private and is controlled by public authority..."* (Som, a kinship worker)

Ging, a local worker, echoed these sentiments: "this is a transitional peri-urban area of Vientiane; they priced the land at about ₭500,000 ($62) per meter." One post-industrial worker, Thong, noted that "I rent land for building my house, only 0.2 hectares, to equivalent of ₭4 million ($500) per year." An interesting of informal worker transformation the natural assets into two types.

DISCUSSION

This article performs qualitative analysis using in-depth interviews to collect data, as well as the instrument used. The 15 KIs used to the unit of analysis are households. The content analysis is done using ATLAS. ti program of the text and concise summary of key results. We identified three groups employed at home in the garment sector of Lao PDR: kinship works, local workers, and post-industrial workers. Differences to other finding with informal workers (Quinlan & Mayhew, 1999) determines the outsourcing workers, (Kantor, 2003) identify the outside employment of the home, (Carr, Chen, & Tate, 2010) defines the self—and local workers.

Focusing on socialist transition economies, Fry and Mees (2016) found that in least-developed countries (LDCs), not all informal workers possessed the assets to transform into their livelihoods. This study found differences (Coate, Handmer, & Choong, 2006; Kantor, 2009; Sangeeta & Erwan, 2006; Scoones, 2009; Zikri, 2017), all participants are transformed the assets: (i) social (bonding and bridging); (ii) human (skills); (iii) financial (incomes); (iv) physical (machinery); and (v) natural (land). This latter finding extends those of other studies validating transformation assets in Lao PDR (Durham, Fielding, Hoy, & White, 2014) but also elsewhere (for example, in India: Arun, Arun, & Devi, 2011) transforming the assets into meaningful livelihood outcomes.

First, the study found that kinship workers are transformed social (bonding), human (skills), financial (incomes), physical (machinery), and natural (land) assets. As Ellis (2000) and Scoones (2009) identify, kinship workers are highly social to motivate the human closely entwined with financial transferred across physical may be accessed natural. According to Ansell, Hajdu, Blerk and Robson (2016), diversification into social, human, and financial related to support the physical and natural. This is also supported by Goudge, Russell, Gilson, Gumede, Tollman and Mills (2009), who described how the long-term stress of transforming assets could lead to overuse the informality, seasonality, and vulnerability.

Second, the study found that local workers were transforming assets to initiate social (bridging) to invest human (skills) expanded the financial (incomes) into their livelihoods. In light of this study finding, (Bebbington, 1999; Emery & Flora, 2006; Green, 2006) the assets are transformed the network to pursue the capability via employment activities are generated incomes to diversify livelihoods. Many scholars have reviewed different, such as transforming the employment relationship into social assets (Shahrilnizam, Balakrishnan, & Murshamsul, 2015), transforming the human assets into employment opportunity (for example, in Malaysia: Samuel & Ramayah, 2016), and financial assets (Carter, Brush, Greene, Gatewood, & Hart, 2010).

Third, the study found that post-industrial workers are highly transformed the human assets to generate the financial assets comprised the livelihoods (Agnete, Carter, & Ljunggren, 2013; Coleman, 1998; Neal, 1995). McWha (2011) argues that post-industrial workers who interact very well with their transforms the capacity development initiatives to the success employed at home. On this point, post-industrial workers are transformed the socially viable to selling labour in economically into their livelihoods (Ayuwat & Chamaratana, 2013; Muyeba & Seekings, 2012).

It is clear that informal workers are transformed the assets into their livelihoods have shaped by kinship and should be improved the local and post-industrial workers. The results indicated that kinship is particularly transformed the social (bonding) closely linked human (skills) also crucial for creating financial (incomes) facilitate physical (machinery) and natural (land). In turn, the local and post-industrial workers are transformed the human (skills) and social (bridging) via employability for generation the financial (incomes) and supported the physical and natural to comprise the livelihoods.

CONCLUSION

This study has explored the five processes through which informal workers are transforming assets into their livelihoods in Lao PDR. The first process is transforming social assets: bonding (ties relationship) and bridging (network). Therefore, the social assets that have attributed significantly help informal workers to create employment activities. The second process

is transforming human assets (skilled labor and experience) via an employability skill workers employed at home. While the potential human assets may increase in production, higher employment status and livelihood-involved.

One of the key attempts to transform that although asset-to-assets are important to convert into their livelihood. The third process is transforming financial assets (income) diversity in employment often seems to livelihood. It can therefore transform the incomes from piece rates according to their main occupation employed in the garment sector. The fourth process is transforming physical assets (machinery) prefer to identify the employment activities. Physical assets vary according to diversify in order to sew the cloth, which enhances production is livelihood-involved. Finally, natural assets (land) can be accumulated and utilized by informal workers employed at home.

A different but interesting result in presenting of the kinship worker assets are highly transformed assets into their livelihoods. With regard to transforming the social embedded human of increasing wealth the financial through physical and thus, reinforced their natural. However, local and post-industrial workers are less able to transform assets into their livelihoods. It was therefore transformed the human assets via employability to diversify the financial to achieve a better livelihood. Yet, precipitation shortages are transforming the physical and natural intensified livelihoods employed at home of the garment sector.

It can be concluded from the study's results that assets contribute significantly to transforming livelihoods, not only in Lao PDR but also in the informal sectors of other LDCs. To do so, there is transformed the human via employability with social to diversify the financial and improved the physical and natural. Future research should aim to simplify mixed methods conducted in different areas. The research framework and methods are highly significant in understanding how employment activities in the informal sector secure livelihoods over time.

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REFERENCES

Agnete, G., Carter, S., & Ljunggren, E. (2013). *Entrepreneurial family and households*. ERC Research Paper No.10.

Ali, T., Ahmad, M., Shahbaz, B., & Suleri, A. (2007). Impact of participatory forest management on financial assets of rural communities in Northwest Pakistan. *Ecological Economics, 63*(2/3), 588-593.

Ansell, N., Hajdu, F., Blerk, L., & Robson, E. (2016). AIDS-affected young people's access to livelihood assets: Exploring 'new variant famine' in rural southern Africa. *Journal of Rural Studies, 46*, 23-34.

Arun, S., Arun, T., & Devi, U. (2011). Transforming livelihoods and assets through participatory approaches: The Kudumbashree in Kerala, India.

International Journal of Public Administration, 34(3), 171-179.

Auty, R., & Kiiski, S. (2004). Natural resources, capital accumulation, structural change, and welfare. *Resource Abundance and Economic Development*, 19-35.

Avogo, F. A., Wedam, E. A., & Opoku, S. M. (2017). Housing transformation and livelihood outcomes in Accra, Ghana. *Cities, 68*, 92-103.

Ayuwat, D., & Chamaratana, T. (2013). Role of labour broker networks in establishing the cost of working abroad for Thai migrant workers. *Asia-Pacific Population Journal, 28*(2), 51-68.

Barbier, E. B. (2011). *Capitalizing on nature: Ecosystems as natural assets*. Cambridge University Press, Cambridge, New York.

Barbier, E. B., Hacker, S. D., Kennedy, C., Koch, E. W., Stier, A. C., & Silliman, B. R. (2011). The value of estuarine and coastal ecosystem services. *Ecological monographs*, *81*(2), 169-193.

Bebbington, A. (1999). Capitals and capabilities: A framework for analyzing peasant viability, rural livelihoods and poverty. *World Development, 27*(12), 2021-2044.

Becker, G. S. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy, 70*(5), 9-49.

Bourdieu, P., & Wacquant, L. J. D. (1992). *An invitation to reflexive sociology*. Chicago, USA: The University of Chicago Press.

Carr, M., Chen, M. A., & Tate, J. (2010). Globalization and home-based workers. *Feminist Economics, 6*(3), 123-142.

Carter, N., Brush, C., Greene, P., Gatewood, E., & Hart, M. (2010). Women entrepreneurs who break through to equity financing: The influence of human, social and financial capital. *Venture Capital, 3*(1), 1-28.

Coate, B., Handmer, J., & Choong, W. (2006). Taking care of people and communities: Rebuilding livelihoods through NGOs and the informal economy in Southern Thailand. *Disaster Prevention and Management: An International Journal, 15*(1), 135-145.

Costanza, R., & Daly, H. E. (1992). Natural capital and sustainable development. *Conservation Biology, 6*(1), 37-46.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*, S95-S120.

Coyne, I. T. (1997). Sampling in qualitative research. Purposeful and theoretical sampling; merging or clear boundaries?. *Journal of Advanced Nursing, 26*, 623-630.

Daovisan, H., & Chamaratana, T. (2017). Making livelihoods work: Employability skills of informal household garment workers in the Lao PDR. *International Journal of Economic Research, 14*(18), 139-150.

Daovisan, H., Promphakping, B., & Chamaratana, T. (2018). A qualitative approach to non-subcontracting home-based garment workers in the Lao PDR, *Kasetsart Journal of Social Sciences*, 1-7.

Daviau, S. (2010). Conducting fieldwork with Tarieng communities in southern Laos: Negotiating discursive spaces between neoliberal dogmas and Lao socialist ideology. *Asia Pacific View Point, 51*(2), 193-205.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing, 18*, 301-331.

Denzin, N. K., & Lincoln, Y. S. (2005). *The gage handbook of qualitative research*. Third Edition, Sage, Thousand Oaks.

DesRoches, C. T. (2015). *The world as a garden: A philosophical analysis of natural capital in*

economics (Doctoral Dissertation), University of British Columbia, Vancouver.

Deverux, S. (2001). Livelihood insecurity and social protection: A re-emerging issue in rural development. *Development Policy Review, 19*(4), 507-519.

Durham, J., Fielding, A., Hoy, D., & White, R. (2014). Validating a livelihood asset scale in Lao PDR. *Field Methods, 26*(4), 362-379.

Ellis, F. (2000). The determinants of rural livelihood diversification in developing countries. *Journal of Agricultural Economics, 51*(2), 289-302.

Emery, M., & Flora, C. (2006). Spiraling-Up: Mapping community transformation with community capitals framework. *Community Development, 37*(1), 19-35.

Erenstein, O., Hellin, J., & Chandna, P. (2010). Poverty mapping based on livelihood assets: A meso-level application in the Indo-Gangetic Plains, India. *Applied Geography, 30*(1), 112-125.

Erlingsson, C., & Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African Journal of Emergency Medicine, 7*(3), 93-99.

Faruqee, I., & Husain, R. (1996). *Adjustment in Africa: Lessons from country case studies*. World Bank Environment Paper 4.

Fry, S., & Mees, B. (2016). Industrial relations in Asian socialist-transition economies: China, Vietnam and Laos. *Post-Communist Economies, 28*(4), 449-467.

Government of the Lao PDR & United Nation. (2013). *Millennium development goals progress report Lao PDR*. Vientiane, Laos: United Nations.

Goudge, J., Russell, S., Gilson, L., Gumede, T., Tollman, S., & Mills, A. (2009). Illness-related impoverishment in rural South Africa: Why does social protection work for some households

but not others?. *Journal of International Development, 21*(2), 231-251.

Green, A. (2006). The transformation of business knowledge into intangible assets. *VINE, 36*(1), 27-34.

Holling, C. (1993). Investing in research for sustainability. *Ecological Applications, 3*, 552-555.

Kantor, P. (2003). Women's empowerment through home–based work: Evidence from India. *Development and Change, 34*(3), 425-445.

Kantor, P. (2009). Women's exclusion and unfavorable inclusion in informal employment in Lucknow, India: Barriers to voice and livelihood security. *World Development, 37*(1), 194-207.

Luthans, R., & Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics, 33*(2), 143-160.

McWha, I. (2011). The roles of, and relationships between, expatriates, volunteers, and local development workers. *Development in Practice, 21*(1), 29-40.

MDGs Progress Report Lao PDR. (2013). *The millennium development goals progress report for the Lao PDR*. The Government of the Lao PDR and the United Nations, Vientiane: Lao PDR.

Muyeba, S., & Seekings, J. (2012). Homeownership, privacy and neighbourly relations in poor urban neighbourhoods in Cape Town, South Africa. *South African Review of Sociology, 43*(3), 41-63.

Neal, D. (1995). Industry-specific human capital: Evidence from displaced workers. *Journal of Labor Economics, 13*(4), 653-677.

Nolintha, V., & Jajri, I. (2016). The garment industry in Laos: technological capabilities, global

production chains and competitiveness. *Asia Pacific Business Review, 22*(1), 110-130.

Pearce, D. W. (1988). Economics, equity and sustainable development. *Futures, 20*(6), 598-605.

Phouxay, K., & Tollefsen, A. (2010). Rural–urban migration, economic transition, and status of female industrial workers in Lao PDR. *Population, Space and Space, 17*(5), 421-434.

Portes, A. (1998). Social capital: its origins and applications in modern sociology. *Annual Review of Sociology, 24*, 1-24.

Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy, 6(1*), 65-78.

Quinlan, M., & Mayhew, C. (1999). The effects of outsourcing on occupational health and safety: A comparative study of factory-based workers and outworkers in the Australian clothing industry. *International Journal of Health Services, 29*(1),83-107.

Rasiah, R., Nolintha, V., & Songvilay, L. (2011). Garment manufacturing in Laos: clustering and technological capabilities. *Asia Pacific Business Review, 17*(2), 193-207.

Sakurai, S., & Ogawa, O. (2006). Assessment of current garment industry in the Lao PDR: Based on a field survey in Vientiane City. *Journal of International Cooperation Studies, 14*(1), 55-74.

Samuel, R., & Ramayah, T. (2016). Employability, mobility and work-life balance: How do they relate for MBA holders in Malaysia?. *Pertanika Journal of Social Sciences & Humanities, 24*(1), 359-374.

Sangeeta, P., & Erwan, Q. (2006). *The informal sector in developing countries: Output, assets and employment*. Research Paper, UNU-WIDER, United Nations University (UNU), No. 2006/130.

Scoones, I. (1998). *Sustainable rural livelihoods: A framework for analysis*. Institute of Development Studies Working Paper 72, 1998. University of Sussex: Brighton.

Scoones, I. (2009). Livelihoods perspectives and rural development. *The Journal of Peasant Studies, 36*(1), 171-196.

Shahrilnizam, M., Balakrishnan, P., & Murshamsul, M. K. (2015). Employer's managerial prerogative right: An evaluation of its relevancy to the employer-employee relationship. *Pertanika Journal of Social Sciences & Humanities, 23*, 227-238.

Stephen, G. L. (2005). The importance of household asset diversity for livelihood diversity and welfare among small farm colonists in the Amazon. *The Journal of Development Studies, 41*(7), 1193-1220.

Su, F., & Shang, H. Y. (2012). Relationship analysis between livelihood assets and livelihood strategies: A Heihe River Basin example. *Sciences in Cold and Arid Regions, 4*(3), 0265-0274.

Tachibana, T. (2014). How one becomes an 'entrepreneur' in a transition economy: The case of manufacturers in Laos. *Development Studies Research, 1*(1), 186-201.

Tran, T., & James, H. (2017). Transformation of household livelihoods in adapting to the impacts of flood control schemes in the Vietnamese Mekong Delta. *Water resources and rural development, 9*, 67-80.

Vixathep, S (2011). Efficiency and productivity change in Lao garment industry: A nonparametric approach. *Journal of International Cooperation Studies, 19*(1), 87-111.

Wiseman, J., & Brasher, K. (2008). Community wellbeing in an unwell world: Trends, challenges, and possibilities. *Journal of Public Health Policy, 29*(3), 353-366.

Woolcock, W., & Narayan, D. (2000). Social capital: Implications for development theory, research,

and policy. *The World Bank Research Observer, 15*(2), 225-249.

World Bank. (2012). *Labour standards and productivity in garments export sectors*. Vientiane: Lao PDR.

Zikri, I. (2017). Social transformation and the change of community capacity of post-Tsunami Aceh, Indonesia. *Pertanika Journal of Social Sciences & Humanities, 25(*3), 1297-1318.

The Impact of Audit Committee Independence and Auditor Choice on Firms' Investment Level

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ABSTRACT

The purpose of this study is to examine the relationship between audit characteristics and firm investment efficiency level. Audit characteristics have been characterized using audit committee (AC) independence and external auditor choice. Top 200 Malaysian listed companies based on market capitalization were selected as a sample. Binomial logistic regression analysis was employed to test the hypotheses for 3 years, that is, 2009, 2010, and 2011. The statistical results show no relationship between AC independence and investment inefficiency, while auditor choice was shown to be positively significant only in 1 year of the study, but was not significant in the other 2 years of study. The results provide further confirmation of the role of corporate governance in enhancing the investment performance of the company. This study provides an indicator to shareholders and investors that a company with strong governance structure will likely make better investment decision. Managers under strong governance are prevented from taking an aggressive investment risk approach that may result in overinvestment. In addition, the company will carefully plan to have an adequate capital so that a good opportunity investment will not being passed due to insufficient financing that will result underinvestment. This study is original, as it focuses on the direct relationship between corporate governance mechanism and firm investment efficiency level that is scarce in the literature, with a special focus on emerging markets in the process of developing their best governance practices.

Keywords: Audit committee independence, auditor choice, corporate governance, firm size, investment efficiency, Malaysia

INTRODUCTION

Corporate governance is the process and structure used to manage the business affairs of a company that allows for accountability. Its ultimate objective is realizing long-term shareholder values, while also taking into account the interests of other stakeholders. Strong corporate governance enhances the transparency of financial statements and improves financial reporting quality (Brown et al., 2010; Firth et al., 2007; Hamid et al., 2011) and thus the investment performance of the company. Reliable company's information will attract prospective investors to invest in the company for a longer term. In addition, company with a good governance has a lower cost of capital. For that reason, good governance will have a positive impact, which may lead to better and more efficient investment decisions and hence, higher firm value (Chen et al., 2011).

Effective corporate governance also will reduce information asymmetry and minimize agency problems via quality financial reporting. Previous studies have shown that information asymmetry and agency cost will ruin a company's performance if the corporate governance of the company is weak. Consequently, this may affect firm's decisions in investment, which leading to existing gap among managers and capital suppliers' interests. Due to this, a company will improvise governance practices, such as enhancing board quality if the company performs poorly (Mulcahy, 2014).

There is a dearth of literature examining the direct impact of corporate governance and firm investment in general, and in the context of developing country like Malaysia in particular. Most of the previous literature has concentrated on the studies related to corporate governance and financial reporting quality (e.g., Agrawal & Chadha, 2005; Ahmad et al., 2016; Brown & Caylor, 2006; Brown et al., 2010; Firth et al., 2007; Hashim et al., 2014; Husnin et al., 2013; Jaafar et al., 2014; Karamaou & Vafeas, 2005) as well as studies concerning financial reporting quality and investment efficiency (e.g., Bushman & Smith, 2001; Gilaninia et al., 2012; Kangarlouei et al., 2011; Li & Wang, 2010; Lin et al., 2015; Shen et al., 2015; Tan et al., 2015). Hence, both areas of research are interrelated as effective corporate governance will lead to increased financial reporting quality, in turn influencing a firm's investment efficiency.

In addition, previous study shows that Malaysians were hit hard by the 1997–1998 Asian financial crisis due to poor governance such as poor capital structure, uncontrollable gearing level, lack of accountability, and weak corporate ethical practices (Khadijah et al., 2015; Manan et al., 2013; Shariman et al., 2018; Salin et al., 2017). Suto (2003) found that the Malaysian corporate sector was too dependent on debt that led to excessive corporate investment before the crisis. Coupled with the weak corporate governance practices, this financial distress is exacerbating. Although many reforms were implemented, Muniandy and Ali (2002) found that more needed to be done to improve the transparency of corporate financial reporting practices to build the confidence and attract potential investors.

Thus, it is interesting to study whether the Malaysian companies have learned a lesson from the financial crisis by making investment in the most efficient way and avoiding excessive or insufficient investment. Deesomsak et al. (2004) found that the financial crisis had a significant impact on firms' capital structure in Thailand, Singapore, and also Malaysia. As one of the most developing country in South East Asia, Malaysia is working very hard to promote itself as a premier investment location and the Greater Kuala Lumpur area as the premier location for multinational company's regional headquarters. In addition, the 6th Prime Minister, Najib Razak has embarked various economic transformation programs (ETPs) with the objective of turning Malaysia into a high income nation by 2020.

Based on this scenario, the purpose of this study is to examine whether corporate governance mechanisms, represented by audit committee (AC) independence and external auditor choice, are able to determine a Malaysian firm's investment efficiency. These two mechanisms that have become the variables in this study are of interest, because a lack of the studies conducted to examine these variables as determinants of the corporate investment efficiency. Previous study shows that these variables are good monitoring corporate mechanism tools to discipline managers in discharging their duty including the roles and responsibilities that are related to the corporate investment.

AC independence, for example, may influence the quality of financial reporting of the company and thus, affecting investment performance. Companies with a higher number of independent directors in an audit committee have a higher tendency to generate better quality accounting earning information (Qinghua et al., 2007), preventing company from managing their earnings (Klein, 2002) and contribute to better performance of the company (Huang & Chan, 2013; Knyazeva et al., 2013). This will attract high-quality capital, which in turn can be used by the firm to only participate in the profitable investment and avoiding from investing in low-quality investment project. A similar scenario is also expected for a company that chooses one of the Big 4 firms as their external auditor, because financial statements audited by this type of auditor tend to be more reliable as compared to smaller audit firms (DeFond & Lennox, 2011; Guy et al., 2010; Jais et al., 2016; Kim et al., 2013; Sundgren & Svanstrom, 2013), because they conform to relevant financial reporting standards (Healy & Palepu, 2001) and are thus viewed as more credible by outsiders.

There are several contributions of this study. First, the study narrows the research gap by examining the relationship between audit characteristics with firm's investment level. This is important in determining whether the check and balance mechanisms are functional and worthwhile to protect the interest of shareholders. Second, it documents evidence showing that strong corporate governance is beneficial

to both investors and shareholders in determining the value of a firm as it will determine whether the corporate governance practice is an effective mechanism to reduce agency cost and information asymmetry and consequently, determine the optimum level of investment of the firms. Practically, this gives assistance to a potential investor to select the right company with the right amount of investment to ensure that their venture in the company is commensurate with the risk taken. Finally, this study will improve the knowledge of shareholders and stakeholders of the current condition of corporate governance and firms' investment level, specifically in the Malaysian corporate context, more than a decade after the country experienced a financial crisis. It is expected that the governance practices of the company should reach the maturity stages because it has been proven that a company with stronger corporate governance are less impacted by the financial crisis.

This paper is organized as follows. The next section contains a review of the literature, an explanation of the theoretical background to support this study, and development of the hypotheses. The third section contains research methodology followed by findings and discussions. The last section contains conclusion and limitations.

LITERATURE REVIEW

Malaysian Corporate Governance

The economic crisis of 1997–1998 increased awareness of good governance in every organization. Sound corporate governance will ensure the integrity of leaders in the organization as well as create a conducive environment for the efficient and sustainable growth of the companies (Suhaimi et al., 2016; Singam, 2003). When there is an increase in corporate governance practices, this strengthens public confidence to invest and participate in the market because they can get better investment information (Abidin & Hashim, 2010).

Realizing this, the High Level Financial Committee on Corporate Governance was founded in 1999 by the Malaysian government with the mission to establish corporate governance framework that is suitable for the Malaysian business and economic environment. As a result, the first Malaysian Code of Corporate Governance was introduced in 2000. This important code guides board of directors in carrying out their duty and responsibilities via highlighting principles and best practices of good governance. This code is revised in 2007 to strengthen the role of the directors particularly their contribution in various board committees in the organization. In 2012, this code underwent another round of revision to include responsibilities of other external stakeholders and market players in the corporate governance system.

Corporate Governance and Investment Efficiency

Li and Wang (2010) described investment efficiency as the positive net present value (NPV) of the investment project undertaken by an organization under a predictive scenario and free from market friction

such as adverse selection or agency cost. McNichols and Stubben (2008) posit that expected benefits and interest from investments such as future growth and product demand are critical factors in investment decision making.

According to previous studies, to increase investment performance level, a firm needs to strengthen their capital structure so that the organization gains ability to finance a good investment opportunity (Verdi, 2006) such as an investment with positive net present value. However, due to financial constraints, a manager will tend to pass some positive net present value projects due to the inability to finance those projects, which will result in underinvestment (Hubbard, 1998).

Nevertheless, under a poor governance structure, although the company may have sufficient capital there is a tendency for the managers to commit fraud (Omar et al., 2016; Rahim et al., 2017; Zakaria et al., 2016) and expropriate the firm's resources by investing inefficiently due to their personal interest that will lead the organization to overinvest (Verdi, 2006). In addition, poor top management support (Suhaimi et al., 2017) and the problem of information asymmetry in an organization may lead a firm to an underinvestment or overinvestment situation (Myers & Majluf, 1984; Verdi, 2006).

Thus, strong corporate governance practices are needed so that the capital of company is optimally utilized to meet optimal investment level of the company. Biddle et al. (2009), for example, found

that quality financial reporting information needed to be enhanced in order to improve investment performance levels. When there is a reduction in information asymmetry between the organization and its investors, this contributes to lower organization costs for rising funding and decreases the cost of monitoring managers. Hence, this will improve optimal project selection (Verdi, 2006).

This can be achieved by improving the corporate governance structure via strengthening AC independence and hiring high-quality external auditor to prevent the misalignment of interest between owners and managers of the company. According to Bushman and Smith (2003), a proper corporate governance structure would ensure that the shareholders and stakeholders would receive reliable information about the organization and the manager will not hide the value of their investment. Also, effective corporate governance can mitigate the agency problem and lead to stronger investment performance (Bushman & Smith, 2003).

Agency Theory

Agency theory predicts that even though a manager may be well informed about organizational details and the existence of a profitable investment opportunity, it might not be pursued due to moral hazard problem. Information asymmetry occurs when the managers (agent) knows more information than the capital provider (principal) who do not have access to the information (Phan & Yoshikawa, 2000; Shin & Kim,

2002). As a result, the manager may have an incentive to provide bias information flow. Thus, when there is a difference in goal between the principal and agent, the decision made by the agent may differ from the principal's perspectives. Managers may show tendencies to make investments or decisions that are harmful compared to the interest of the principal. For instance, managers can simply invest in a nonvalue maximizing project to satisfy their own interests and personal goals (Shin & Kim, 2002). According to previous research, agency theory would make a business's fixed investment inefficient due to the agency cost in corporations (Shin & Kim, 2002).

This theory will be used in the present study to examine the relationship between corporate governance structures (i.e., AC independence, auditor choice) and firm's investment level. The theory suggests that there is a conflict between the management self-interest behaviour that is not aligned with shareholder interests. Thus, it is critical to examine whether the monitoring cost incurred to monitor managers is sufficient to prevent this misalignment of interest.

Hypotheses Development

AC Independence. Since incidents of corporate scandal are on the rise, the importance of AC has received considerable attention in organizations (Azim, 2012; Sarens et al., 2009). The existence of AC will improve the efficiency of corporate governance through board monitoring

(Leuz & Verrecchia, 2000). AC need to be independent to serve as an effective monitoring body (Azim, 2012) and improve corporate governance practice in the organization (DeZoort & Salterio, 2001) while ensuring that every decision and action taken by the organization is free from biases and personal interests. Barua et al. (2010) claimed that AC composition was an important determinant factor for an effective monitoring mechanism. Effective functions of AC roles and responsibilities include minimizing agency conflict, protecting shareholder interests, mitigating corporate failure, and consequently increasing a firm's value (Mohiuddin & Karbhari, 2010). AC independence is also able to enhance financial reporting quality and indirectly increase a firm's performance (Erickson et al., 2005).

In the Malaysian context, an organization with a lesser number of independent directors in AC associated with low corporate performance (Al-Mamun et al., 2014), has higher tendency to commit fraud (Hutchinson & Zain, 2009), amend financial reports (Ismail & Rahman, 2011; Wahab et al., 2014) and involve in earnings management (Bukit & Iskandar, 2009; Jamil & Nelson, 2011; Rahman & Ali, 2006; Salleh et al., 2007). All of these empirical findings show that AC independence can be an effective mechanism to monitor a company, including scrutinizing firm's investment efficiency in either overinvestment or underinvestment. Thus, the hypothesis is as follows:

H_1: There is a no relationship between AC independence and overinvestment or underinvestment level.

Auditor Choice. Fan and Wong (2005) found that auditors did take part in monitoring and controlling roles to mitigate agency conflicts that may arise between the owners and managers. This will reduce the information asymmetry and agency cost via increased disclosure (Bokpin, 2013; Ntim et al., 2012) and better reliable information (Husnin et al., 2016; You et al., 2003). Also, Jensen and Meckling (1976); Watts and Zimmerman (1983) suggested that an auditor can help the board and its shareholders to monitor the manager and safeguard the integrity of financial reports. In addition, the appointment of an auditor also can reduce managerial opportunities to perform earning manipulation related to the accounting information. This is documented by Lee and Lee (2013), who found that the size of audit firms improves the value relevance of earnings and book value of equity of the company.

DeFond and Zhang (2014) suggested that higher audit quality gave greater assurance of high financial reporting quality. Becker et al. (1998); Teoh and Wong (1993) found that financial reporting was more reliable and higher in quality if the financial reporting was audited by a large audit firm. Quality auditors who produce reliable financial reports will have the ability to reduce agency cost and information asymmetry (Chow, 1982) and will indirectly encourage the management to fulfil their roles and responsibilities to act in the interests of its shareholders (Asmuni et al., 2015). Furthermore, increased financial reporting quality will lead to optimal firm investment level through the mitigation of adverse selection (Balakrishnan et al., 2014; Kangarlouei et al., 2011).

Previous studies in Malaysia showed that bigger size audit firm would qualify audit report of the company with aggressive earnings management (Johl et al., 2007), associated with less audit delay (Che-Ahmad & Abidin, 2008) and hired with higher risk and complexity, indicating their capacity and expertise in monitoring this type of business entities (Nazri et al., 2012; Wahab et al., 2011). Gul (2006) also found that Malaysian auditors increased premium and hence, audit worked for high risk clients. Based on these literatures, it can be concluded that a higher quality auditor has the influence to diminish both overinvestment and underinvestment, hence increasing firm investment efficiency and performance level. The next hypothesis is as follows:

H_2: There is no relationship between the choice of auditors and the firm's overinvestment or underinvestment level.

METHODS

Sample Selection

The samples for this study consist of the top 200 public listed companies, based on their market capitalization at the end of 2011. This sample has excluded finance industries due to differences in nature of business as

well as accounting practices and treatment (Arce & Mora, 2002). Companies listed in the secondary market and without sufficient data were also excluded, leaving the final sample total at 163. The data for similar companies also collected for 2010 and 2009 (Table 1), making the total observations 489 firm-years.

Table 1
Sample selection

Top 200 ranking companies.	200
Less: Finance industry companies	(24)
Secondary market company	(1)
Companies with insufficient data	(12)
Total sample selected	163

Data Collection

The main sources of the data have been collected from the companies' annual reports and Thomson DataStream for 3 consecutive years, from 2009 until 2011.

Dependent Variable

Investment Level. The dependent variable (firm investment level) for the final model used in this study is the residual or error term of yet another regression model. To derive the residual, the preliminary regression model must be constructed. As the study examines data from 3 consecutive years, from 2009 until 2011, there will be three preliminary multiple linear regression models, that is, the base year 2011 (t), 2010 (t–1), and 2009 (t–2). The general preliminary regression models are explained below.

$$Y1 = \alpha 0 + \alpha 1\ Z1 + \alpha 2\ Z2 + \alpha 3\ Z3 + \varepsilon 1$$

Where:

Y_1 = Investment, measured by investment in plant, equipment, land, buildings, and research and development expenditure *less* revenue from selling fixed asset *over* total assets

Z_1 = Growth in revenue in the preceding years. This is coded as 0 or 1. The figure 0 means there was no growth or positive growth in years (t)* where t is the base year 2011. The figure 1 means there was negative growth in year (t)* [*For 2010 = (t–1), 2009 = (t–2)]

Z_2 = Percentage of firm's revenue growth in year (t)* where t is base year 2011[*For 2010 = (t–1), 2009 = (t–2)]

= ((Revenue (t)* less revenue (t–1)** over revenue (t–1)**) × 100 %
[*For 2010 = (t–1), 2009 = (t–2)]
[**For 2010 = (t–2), 2009 = (t–3)]

Z_3 = The product of Z_1 and Z_2 for the year (t)*

= ($Z_1 × Z_2$)
[*For 2010 = (t–1), 2009 = (t–2)]

ε_1 = Residual or error term for the year (t)*
[*For 2010 = (t–1), 2009 = (t–2)]

Investment level has been measured by the deviation from expected investment using the investment prediction model as a function of revenue growth, per Biddle et al. (2009); Kangalouei et al. (2011); Li and Wang (2010). The differences or changes from normal standards of expected investment are considered inefficient investments. The differences will be determined through their residual error term. If there is negative residual error term, it is considered as underinvestment whereas positive residual error term is considered as overinvestment. For the purpose of running the overall regression model, the error term (residual) found in the preliminary multiple regression models will be used as the new dependent variable.

Independent Variables

AC Independence. AC independence has been measured by the proportion of the independent non-executive directors out of total number of directors (Azim, 2012).

Auditor Choice. In this study, the choice of auditor is measured by referring to the representation of the audit firm that audits the company either Big 4 or non-Big 4 audit firm. Big 4 auditors comprised of Deloitte, KPMG, Ernst and Young, and PriceWaterhouseCoopers. It is measured by the proxy of a dummy variable. If the auditor is Big 4, the dummy is 1 and 0 for non-Big 4 audit firms (Ahmad-Zaluki & Hussin, 2009).

Control Variable

Firm Size. Firm size is used as a control variable as measured by total assets of the company (Ghazali, 2010; Tian & Lau, 2001). To avoid non-normal distribution, total assets have been transformed into $\log_{10}$ value, consistent with many previous studies that have used assets as a control variable in the empirical research such as Nor et al. (2017).

Statistical Analysis

Binomial logistic regression analysis was used to test the research hypothesis in this study as the dependent variable is categorized (overinvestment, underinvestment) and the model has one or more independent variables (AC independence, auditor choice). In this study, there are three developed logistic regression equations that are represented for the years 2009, 2010, and 2011. The general logistic regression equation model for 2011 is as follows:

$$Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon_2$$

Where,

Y_2 = Residual of the preliminary model. If ε_1 is less than zero or negative value (indicating underinvestment in previous studies), then coded as 0. Whereas, if ε_1 is more than zero or positive value (indicating overinvestment in previous studies), then it will be coded as 1 for the year (t)

X_1 = Proportion of independent non-executive directors in the AC for

the year (t).

X_2 = Whether the auditors come from the Big 4 firm (Ernst and Young, Deloitte, KPMG, PricewaterhouseCoopers) or not. If yes = 1, if no = 0 for year (t).

X_3 = Firm size in terms of value of the total asset, expressed as a $\log_{10}$ function for the year (t).

ε_2 = Residual or error term for the final model in the year (t)

The equation models for 2009 and 2010 are similar except that 2009, year = $t–2$ and for 2010, year = $t–1$.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2
Number and percentage of firms based on industries

Industry	Size	
	No	%
Trading and Services	46	28.2
Industrial Product	34	20.9
Plantation	25	15.3
Consumer Product	23	14.1
Property	20	12.3
Construction	7	4.3
Infrastructure	4	2.5
Hotel	2	1.2
Technology	2	1.2
Total	163	100

Table 2 shows the number of companies in the sample selected based on industry. Majority of the companies are from Trading and Services and Industrial Product segment, which make up almost 50% of the total sample.

Table 3 partly presents the finding of the descriptive analysis of the continuous variable for year 2011, 2010, and 2009 that consist of AC independence and log of the total assets. The minimum and maximum values of the proportion of independent AC members are 0.60 and 1.00, respectively.

This shows that all the companies comply with the MCCG requirements to have a majority independence member in the AC, in this case 60%, while there are also companies that comprised 100% independence members. The averages of independent AC members are about 87.64% to 89.99%. In term of assets, the minimum number of the log total asset is 5.08, 5.29, and 5.2 in the years 2011, 2010, and 2009 respectively, while the maximum is 7.87 for years 2011 and 2010 and 7.85 for 2009.

Table 3
Descriptive statistics of all the variables

Variables	Years	Min	Max	Mean	SD
AC Independence	**2011**	0.60	1.00	0.8999	0.14804
	2010	0.60	1.00	0.8858	0.14731
	2009	0.60	1.00	0.8764	0.14319
Total assets$_{log10}$	**2011**	5.08	7.87	6.3937	0.52538
	2010	5.29	7.87	6.3451	0.52752
	2009	5.20	7.85	6.3020	0.53807
				No of Companies	%
Investment	**2011**	Overinvested		86	52.8
		Underinvested		77	47.2
	2010	Overinvested		86	52.8
		Underinvested		77	47.2
	2009	Overinvested		85	52.1
		Underinvested		78	47.9
Auditor choice	**2011**	Big 4		135	82.8
		Non-Big4		28	17.2
	2010	Big 4		135	82.8
		Non-Big4		28	17.2
	2009	Big 4		136	83.4
		Non-Big4		27	16.6

AC = Audit committee

Table 3 also shows the descriptive statistics for the categorical variables that includes firm's investment level and auditor choice. There is a slightly higher number of the companies that overinvest, approximately 52% to 53% for all the years indicating that there is no substantial difference between the numbers of companies that overinvest or underinvest in the period of study.

The auditor choice is represented by both Big 4 and non-Big 4 audit firms. It indicates that the majority of the companies (about 82%–83%) employed by Big 4 as their auditor, indicates their trust on the quality of work and accountability perform by this kind of firms. In addition, Big 4 is more competent to audit the company that is more complex in their operation and activities including investment activities. Besides, due to an increase in the perception of investors and stakeholders' on transparency, competent, and proficient auditors are in higher demand (Rahman & Ali, 2006).

Correlation Analysis

Table 4 presents the Pearson correlation matrix of all the variables. The investment is significantly correlated with auditor choice in 2011 ($r = 0.171$, $p < 0.05$) and firm size,

measured by total assets in all three years (2011 − $r = 0.292$, $p < 0.01$; 2010 − $r = 0.222$, $p < 0.01$; 2009 − $r = 0.209$, $p < 0.01$).

Generally, all correlation values are less than 0.8, indicating no multicollinearity issue as suggested by Gujarati (2003).

Table 4
Correlation coefficient matrix of all the variables

	Investment	AC independence	Auditor choice	Total assets$_{log10}$
2011				
Investment	1			
AC independence	−0.060	1		
Auditor choice	0.171*	0.047	1	
Total assets$_{log10}$	0.292**	0.088	0.139	1
2010				
Investment	1			
AC independence	−0.087	1		
Auditor choice	0.090	0.002	1	
Total assets$_{log10}$	0.222**	0.037	0.147	1
2009				
Investment	1			
AC independence	−0.064	1		
Auditor choice	−0.030	-0.022	1	
Total assets$_{log10}$	0.209**	0.073	0.143	1

** Correlation is significant at the 0.01 level (two-tailed)
* Correlation is significant at the 0.05 level (two-tailed)

Results From the Logistic Regression Models

Logistic regression analysis was used in this study to explore the predicted ability of independent variable (AC independence, auditor choice) on the categorical dependent variable (overinvestment, underinvestment). There are three types of assumptions that must be considered before using these types of analyses, which are sample size, multicollinearity and outliers (Pallant, 2010). In this study, there are 163 companies

selected for the sample in 2009, 2010, and 2011. This amount is a sufficient requirement to run logistic regression per Field (2009) as at least 50 cases are needed to run this type of analysis.

Multicollinearity has been investigated based on Tolerance and VIF (Variance inflation factor) values. Based on Table 5, all the variables have a tolerance value of more than 0.1 and VIF of below than 10, indicating no multicollinearity problem among the variables.

Table 5
Multicollinearity test - Tolerance and VIF

Variable		Collinearity Statistics	
		Tolerance	VIF
AC Independence	2011	0.829	1.206
	2010	0.798	1.254
	2009	0.836	1.196
Auditor choice	2011	0.972	1.028
	2010	0.976	1.025
	2009	0.960	1.042
Total assets$_{log10}$	2011	0.861	1.162
	2010	0.836	1.196
	2009	0.864	1.158

AC = Audit committee

For the third assumption, outliers, visual examination of the scatter plot confirmed that all cases were between 3.3 to −3.3 indicates that outlier conditions have been sufficiently met in order to conduct the logistic regression analysis (Tabachnick & Fidell, 2007).

Table 6
Logistic regression analysis of final model

	2011	2010	2009
AC independence			
B	−1.173	−0.455	−0.880
SE	1.293	1.258	1.199
Wald	0.823	0.131	0.538
Sig.	0.364	0.718	0.463
Odd Ratio or Exp(B)	0.309	0.635	0.415
Lower	0.025	0.054	0.040
Upper	3.9	7.472	4.349
Auditor choice			
B	0.867	0.364	-0.345
SE	0472	0.448	0.447
Wald	3.369	0.662	0.598
Sig.	0.066***	0.416	0.440
Odd Ratio or Exp(B)	2.379	1.439	0.708
Lower	0.943	0.599	0.295
Upper	6.002	3.461	1.699

Table 6 *(continue)*

	2011	2010	2009
Total assets$_{log10}$			
B	1.262	1.067	0.879
SE	0.373	0.363	0.342
Wald	11.419	8.658	6.600
Sig.	0.001**	0.003**	0.01**
Odd Ratio or Exp(B)	3.532	2.908	2.409
Lower	1.699	1.428	1.232
Upper	7.342	5.92	4.711
Constant			
B	−6.709	−4.044	−3.844
SE	2.422	2.285	2.199
Wald	7.676	3.132	3.056
Sig.	0.006	0.077	0.080
Odd Ratio or Exp(B)	0.001	0.018	0.021

AC = Audit committee, *p < 0.05, **p< 0.01, ***p< 0.1

Table 6 presents the finding of logistic regression analysis for all the years under examination. For 2011, only auditor choice has significant relationship with firm investment level significant at 10% (χ^2 (5, N = 163) = 6.926, p > 0.05). As a whole, the results explain between 12.4% (Cox and Snell R square) and 16.5% (Nagelkerke R square) of the variance in firm's investment level in the companies and correctly classified 65% cases. In this year, auditor choice is also the strongest predictor of 2.379 while the weakest predictor is AC independence at 0.309. The result from the regression shows that auditor choice has positive significant relationship with overinvestment level indicating most of the organizations that employ Big 4 auditors have a higher tendency to overinvest.

None of the independent variables show significant findings in 2010 and 2009. In 2010, the results explain between 9.6% (Cox and Snell R square) and 12.8% (Nagelkerke R Square) of the variance in investment efficiency in the companies and correctly classified 60.7% of the cases (χ^2 (5, N = 163) = 8.019, p > 0.05). In 2009, the result explains between 5.8% (Cox and Snell R square) and 7.8% (Nagelkerke R square) of the variance in investment efficiency in the companies and correctly classified 61.3% of cases (χ^2 (5, N = 163) = 0.783, p > 0.05). Auditor choice is the strongest predictor for both years (2010: 1.439; 2009: 0.708) compared to AC independence (2010: 0.635; 2009:0.415).

Total assets have shown a significant relationship with firm's investment level in all three years at a 1% significant level, indicating that the larger a firm size is, the greater tendency to overinvestment. This also implies that the higher the total assets of the company possess, the higher this variable may contribute to overinvestment.

Table 7
Result of the hypothesis testing

	2011	2010	2009
Hypothesis 1	Supported	Supported	Supported
Hypothesis 2	Reject	Supported	Supported

Table 7 summarizes the hypotheses that have been tested. It shows only hypothesis 2 being rejected, indicating that companies that employ Big 4 auditor have the tendency to overinvest. This result, however, needs to be deduced with precautions due to several reasons. First, it was only rejected in 1 year, 2011, but supported in 2 previous years, implying that it is actually supported or accepted in majority period of under examinations. Second, it is only significance at 10% level, which is considered the weakest level of statistical significant. If this research decides the significance level of 5% or 1%, this hypothesis will be rejected.

Hypothesis 1 was supported in all 3 years, while hypothesis 2 was supported in 2010 and 2009, consistent with many previous empirical findings such as Barua et al. (2010); Benlemlih and Bitar (2016); De Zoort and Salterio (2001); Nor et al. (2017), and Sun (2016). Although audit committee and external auditor do not directly responsible for investment decisions, their role as a watchdog entities ensure the rules, regulations, and guidelines of the company are to be complied by the managers. Thus, the managers need to properly manage the company so that the company has sufficient capital to finance high-quality investment when the opportunity come and avoid them to forego high-quality project

due to insufficient financing as a result of poor capital management. Beside, credible and more transparent financial reporting, coupled with good corporate governance structure able to attract long-term genuine investors and business partners that generate huge positive return to the company,

In addition, close monitoring by audit committee and external auditor are effective as disciplinary tools to prevent managers from expropriate company's resources for personal gain and making poor decision to invest in low-quality investment project. Hence, the managers will be more accountable in managing corporate investment and aligned their interest with the corporate objective.

This is consistent with argument of agency cost within the Agency Theory in monitoring the behavior of the managers. Effective corporate governance can mitigate the agency problem and hence, lead to a stronger investment performance (Bushman & Smith, 2003). Previous studies also show that AC composition is an important determinant factor for effective monitoring mechanism (Azim, 2012; Barua et al., 2010; De Zoort & Salterio, 2001). Other researchers such as Becker et al. (1998); Benlemlih and Bitar, (2016); Chow (1982); DeFond and Zhang (2014); Fan and Wong (2005); Lee and Lee (2013); Nor et al.

(2017); Sun (2016); Teoh and Wong (1993), and You et al. (2003), also suggesting strong monitoring elements in corporate governance mechanism are able to improve the investment efficiency of a company.

CONCLUSION

Jensen and Meckling (1976) suggested that managers were more highly motivated to maximize their wealth rather than pursuing shareholders' interests through investment opportunities. The existence of information asymmetry between a firm and shareholders can impair investment efficiency due to moral hazard issues and an adverse selection may lead to either overinvestment or underinvestment. The implementation of corporate governance plays an important role in monitoring and controlling either overinvestment or underinvestment. This study intended to test the hypotheses whether corporate governance structure, proxies by AC independence and auditor choice has the influence to firm's investment level measured by overinvestment or underinvestment. Logistic regression analysis has been employed to examine the relationship between the variables.

The statistical results indicate no relationship between AC independence with overinvestment and underinvestment level, implying that the existence AC independence will improve the corporate governance through board monitoring on the efficiency of the company's investment. The analysis also shows that choice of auditor does not influence whether a

firm is underinvested or overinvested in 2-year period under examination, showing company employing larger audit firm also has good and strong governance mechanism that lead to durable investment level and has stable and profitable investment in the longer outlook. Overall, this study has contributed to the accounting literature, particularly in the examination of corporate governance structure and investment level, by concluding that corporate governance is an effective mechanism to monitor and control company's overinvestment or underinvestment.

This study also gives additional knowledge on the effectiveness of the audit committee as a corporate governance mechanism to professional practitioners, accounting bodies and policy makers such as Bursa Malaysia, Securities Commission, Malaysian Institute of Corporate Governance and Malaysian Institute of Accountants. These institutions and bodies need to embark more efforts to strengthen the policies on the audit committee effectiveness and improving the accounting and auditing profession quality. For shareholders of the company, they need to influence the top management to select high-quality auditors such as a Big 4 audit firms and adopt the best practices in establishing the audit committee of the company. For other group of stakeholders such as lender and supplier, they need to carefully choose their clients and trading partners like select the companies that exercise good governance practices as this type of company manage

their assets and cash carefully and do not waste their resources in making wrong investment decision.

There are some limitations of this study. First, we have selected a limited number of samples based on the top 200 ranking from market capitalization. This is more likely to capture large-sized companies. Second, only 3 consecutive years, from 2009 till 2011 are selected. Another study should consider years both before and after the implementation of MCCG 2012 in order to scrutinize the effectiveness of corporate governance implementation among listed companies.

Third, this study has used two proxies to measure investment level that includes residual value of overinvestment or underinvestment (deviation from expected investment), which have not been measured as a single variable. Thus, individual measurement of each variable should be incorporated into future research.

Fourth, from a geographical perspective, this study has been limited to only Malaysia. It does not have a global outlook with countries with different economic levels. Therefore, this study is restricted to companies from developing countries. Future studies may expand the sample selection to more countries and examine whether there is a significance influence due to variations in economic and governance models.

Finally, this study is a cross-sectional study; thus, it may have limited the consequences and results of the hypothesis testing. Future studies should collect more years of data and employ a time series to obtain more robust and reliable results.

REFERENCES

Abidin, Z. Z., & Hashim, A. S. (2010). *Corporate governance practice of the company secretary*. Shah Alam: University Publication Centre of Universiti Teknologi Mara.

Agrawal, A., & Chadha, S. (2005). Corporate governance and accounting scandals. *Journal of Law and Economics*, *48*(2), 371–406.

Ahmad, N. M. N. N., Nawawi, A., & Salin, A. S. A. P. (2016). The relationship between human capital characteristics and directors' remuneration of Malaysian public listed companies. *International Journal of Business and Society*, *17*(2), 347–364.

Ahmad -Zaluki, N. A., & Hussin, W. N. W. (2009). Corporate governance and the quality of financial information disclosure. *Accountant Today*, 32–34.

Al-Mamun, A., Yasser, Q. R., Rahman, M. A., Wickramasinghe, A., & Nathan, T. M. (2014). Relationship between audit committee characteristics, external auditors and economic value added (EVA) of public listed firms in Malaysia. *Corporate Ownership & Control*, *12*(1), 899–910.

Arce, M., & Mora, A. (2002). Empirical evidence of the effect of European accounting differences on the stock market valuation of earnings and book value. *The European Accounting Review*, *11*(3), 573–599.

Asmuni, A. I. H, Nawawi, A., & Salin, A. S. A. P. (2015). Ownership structure and auditor's ethnicity of Malaysian public listed companies. *Pertanika Journal of Social Science and Humanities, 23*(3), 603–622.

Azim, M. I. (2012). Corporate governance mechanisms and their impact on company performance: A structural equation model analysis. *Australian Journal of Management*, *37*(3), 481–505.

Balakrishnan, K., Core, J. E., & Verdi, R. S. (2014). The relation between reporting quality and financing and investment: Evidence from changes in financing capacity. *Journal of Accounting Research*, *52*(1), 1–36.

Barua, A., Rama, D. V., & Sharma, V. (2010). Audit committee characteristics and investment in internal auditing. *Journal of Accountant and Public Policy, 29*(5), 503–513.

Becker, C. L., DeFond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, *15*(1), 1–24.

Benlemlih , M., & Bitar, M. (2016). Corporate social responsibility and investment efficiency. *Journal of Business Ethics*, 148(3), 647-671.

Biddle, G. C., Hilary, G., & Verdi, R. S. (2009). How does financial reporting quality relate to investment efficiency? *Journal of Accounting and Economics*, *48*(2), 112–131.

Bokpin, G. (2013). Determinants and value relevance of corporate disclosure: Evidence from the emerging capital market of Ghana. *Journal of Applied Accounting Research*, *14*(2), 127–146.

Brown, J., Falaschetti, D., & Orlando, M. (2010). Auditor independence and earnings quality: Evidence for market discipline vs. Sarbanes-Oxley proscriptions. *American Law and Economics Review, 12*(1), 39–68.

Brown, L., & Caylor, M. (2006). Corporate governance and firm valuation. *Journal of Accounting and Public Policy*, *25*(4), 409–434.

Bukit, R. B., & Iskandar, T. M. (2009). Surplus free cash flow, earnings management and audit committee. *International Journal of Economics and Management*, *3*(1), 204–223.

Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, *32*(1), 237–333.

Bushman, R. M., & Smith, A. J. (2003). Transparency, financial accounting information, and corporate governance. *Economic Policy Review, 9*(1), 65–87.

Che-Ahmad, A., & Abidin, S. (2009). Audit delay of listed companies: A case of Malaysia. *International Business Research*, *1*(4), 32–39.

Chen, F., Hope, O. K., Li, Q., & Wang, X. (2011). Financial reporting quality and investment efficiency of private firm in emerging markets. *The Accounting Review*, *86*(4), 1255–1288.

Chow, C. W. (1982). The demand for external auditing: Size, debt and ownership influences. *Accounting Review*, *57*(2), 272–291.

Deesomsak, R., Paudyal, K., & Pescetto, G. (2004). The determinants of capital structure: Evidence from the Asia Pacific region. *Journal of Multinational FinancialMmanagement*, *14*(4), 387–405.

DeFond, M. L., & Lennox, C. S. (2011). The effect of SOX on small auditor exits and audit quality. *Journal of Accounting and Economics*, *52*(1), 21–40.

DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of Accounting and Economics*, *58*(2), 275–326.

DeZoort, F. T., & Salterio, S. E. (2001). The effects of corporate governance experience and financial-reporting and audit knowledge on audit committee members' judgments. *Auditing: A Journal of Practice and Theory*, *20*(2), 31–47.

Erickson, J., Parka, Y. W., Reisingb, J., & Shin, H.-H. (2005). Board composition and firm value under concentrated ownership: The Canadian evidence. *Pacific-Basin Finance Journal*, *13*(4), 387–410.

Fan, J. P., & Wong, T. J. (2005). Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia. *Journal of Accounting Research*, *43*(1), 35–72.

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: SAGE Publications Ltd.

Firth, M., Fung, P., & Rui, O. (2007). Ownership, two-tier board structure and the informativeness of earnings: Evidence from China. *Journal of Accounting and Public Policy, 26*(4), 463–496.

Ghazali, N. A. M. (2010). Ownership structure, corporate governance and corporate performance in Malaysia. *International Journal of Commercial and Management*, *20*(2), 109–119.

Gilaninia, S., Chegini, M. G., & Mohtasham, E. M. (2012). Financial reporting quality and investment efficiency of Iran. *Interdisciplinary Journal of Contemporary Research in Business*, *4*(7), 218–222.

Gujarati, D. N. (2003). *Basic econometrics*. New York, NY: Mc Graw-Hill.

Gul, F. A. (2006). Auditors' response to political connections and cronyism in Malaysia. *Journal of Accounting Research*, *44*(5), 931–963.

Guy, D. F., Ahmed, M. A. M., & Randal, J. E. (2010). Audit quality attributes, client size and cost of equity capital. *Review of Accounting and Finance, 9*(4), 363–381.

Hamid, A. A., Haniff, M. N., Osman, M. R., & Salin, A. S. A. P. (2011). The comparison of the characteristics of the Anglo-Saxon governance model and the Islamic governance of IFIs. *Malaysian Accounting Review, 10*(2), 1–12.

Hashim, M. F., Nawawi, A., & Salin, A. S. A. P. (2014). Determinants of strategic information disclosure – Malaysian evidence. *International Journal of Business and Society*, *15*(3), 547–572.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics, 31*(1–3), 405–440.

Huang, H. H., & Chan, M. L. (2013). Long-term stock returns after a substantial increase in the debt ratio. *Applied Financial Economics*, *23*(6), 449–460.

Hubbard, R. G. (1998). Capital market imperfections and investment. *Journal of Economics Literature, 36*(1), 193–225.

Husnin, A. I., Nawawi, A., & Salin, A. S. A. P. (2013). Corporate governance structure and its relationship with audit fee: Evidence from Malaysian public listed companies. *Asian Social Science, 9*(15), 305–317.

Husnin, A. I., Nawawi, A., & Salin, A. S. A. P. (2016). Corporate governance and auditor quality – Malaysian evidence. *Asian Review of Accounting, 24*(2), 202–230.

Hutchinson, M., & Zain, M. M. (2009). Internal audit quality, audit committee independence, growth opportunities and firm performance. *Corporate Ownership and Control*, *7*(2), 50–63.

Ismail, K. N. I. K., & Rahman, S. A. S. A. (2011). Audit committee and the amendments of quarterly financial reports among Malaysian companies. *Jurnal Pengurusan*, *32*(1), 3–12.

Jaafar, M. Y., Nawawi, A., & Salin, A. S. A. P. (2014). Directors' remuneration disclosure and firm characteristics – Malaysian evidence. *International Journal of Economics and Management*, *8*(2), 269–293.

Jais, K. M., Nawawi, A., & Salin, A. S. A. P. (2016). Reduction of audit quality by auditors of small and medium size audit firms in Malaysia: A case of premature sign-off of audit documents. *Journal of Accounting, Business & Management*, *23*(2), 1–12.

Jamil, N. N., & Nelson, S. P. (2011). An Investigation on the Audit Committees Effectiveness: The Case for GLCs in Malaysia. *Gadjah Mada International Journal of Business*, *13*(3), 287–305.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

Johl, S., Jubb, C. A., & Houghton, K. A. (2007). Earnings management and the audit opinion: evidence from Malaysia. *Managerial Auditing Journal*, *22*(7), 688–715.

Kangarlouei, S. J., Motavassel, M., Azizi, A., & Farahani, M. S. (2011). The investigation of the relationship between financial reporting quality and investment efficiency in Tehran Stock Exchange (Tse). *Australian Journal of Basic and Applied Sciences*, *5*(12), 1165–1172.

Karamanou, I., & Vafeas, N. (2005). The association between corporate boards, audit committees and management earnings forecasts: An empirical analysis. *Journal of Accounting Research, 43*(3), 453–486.

Khadijah, A. S., Kamaludin, N., & Salin, A. S. A. P. (2015). Islamic work ethics (IWE) practice among employees of banking sectors. *Middle-East Journal of Scientific Research, 23*(5), 924–931.

Kim, J. B., Song, B. Y., & Tsui, J. S. (2013). Auditor size, tenure, and bank loan pricing. *Review of Quantitative Finance and Accounting*, *40*(1), 75–99.

Klein, A. (2002). Audit committee, board of director characteristics and earnings management. *Journal of Accounting and Economics*, *33*(3), 375–400.

Knyazeva, A., Knyazeva, D., & Masulis, R. W. (2013). The supply of corporate directors and board independence. *Review of Financial Studies*, 26(6), 1561–1605.

Lee, H. L., & Lee, H. (2013). Do big 4 audit firms improve the value relevance of earnings and equity? *Managerial Auditing Journal*, *28*(7), 628–646.

Leuz, C., & Verrecchia, R. E. (2000). The economic consequences of increased disclosure. *Journal of Accounting Research*, *38*, 91–124.

Li, Q., & Wang, T. (2010). Financial reporting quality and corporate investment efficiency: Chinese experience. *Nankai Business Review*, *1*(2), 197–213.

Lin, C. J., Wang, T., & Pan, C. J. (2015). Financial reporting quality and investment decisions for family firms. *Asia Pacific Journal of Management*, *3*(2), 1–34.

Manan, S. K. A., Kamaludin, N., & Salin, A. S. A. P. (2013). Islamic work ethics and organizational commitment: Evidence from employees of banking institutions in Malaysia. *Pertanika Journal of Social Science and Humanities, 21*(4), 1471–1489.

McNichols, M. F., & Stubben, S. R. (2008). Does earnings management affect firms' investment decisions? *The Accounting Review, 83*(6), 1571–1603.

Mohd Saleh, N., Mohd Iskandar, T., & Mohid Rahmat, M. (2007). Audit committee characteristics and earnings management: Evidence from Malaysia. *Asian Review of Accounting*, *15*(2), 147–163.

Mohiuddin, M., & Karbhari, Y. (2010). Audit committee effectiveness: A critical literature review. *AIUB Journal of Business and Economics*, *9*(1), 97–125.

Mulcahy, M. B. (2014). Room for improvement: The impact of bad losses on board quality. *Journal of Applied Accounting Research*, *15*(3), 255–272.

Muniandy, B., & Ali, M. J. (2012). Development of financial reporting environment in Malaysia. *Research in Accounting Regulation*, *24*(2), 115–125.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), 187–221.

Nazri, S. N. F. S. M. S., Smith, M., & Ismail, Z. (2012). The impact of ethnicity on auditor choice: Malaysian evidence. *Asian Review of Accounting*, *20*(3), 198–221.

Nor, N. H. M., Nawawi, A., & Salin, A. S. A. P. (2017). The influence of board independence, board size and managerial ownership on firm investment efficiency. *Journal of Social Science and Humanities, 25*(3), 1039-1058.

Ntim, C. G., Opong, K. K., Danbolt, J., & Thomas, D. A. (2012). Voluntary corporate governance disclosures by post-apartheid South African corporations. *Journal of Applied Accounting Research*, *13*(2), 122–144.

Omar, M., Nawawi, A., & Salin, A. S. A. P. (2016). The causes, impact and prevention of employee fraud: A case study of an automotive company. *Journal of Financial Crime*, *23*(4), 1012–1027.

Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS* (4th ed.). Berkshire: McGraw-Hill.

Phan, P. H., & Yoshikawa, T. (2000). Agency theory and Japanese corporate governance. *Asia Pacific Journal of Management*, *17*(1), 1–27.

Qinghua, W., Pingxin, W., & Junming, Y. (2007). Audit committee, board characteristics and quality of financial reporting: An empirical research on Chinese securities market. *Frontier Business Research in China*, *1*(3), 385–400.

Rahim, S. A. A., Nawawi, A., & Salin, A. S. A. P. (2017). Internal control weaknesses in a cooperative body: Malaysian experience. *International Journal Management Practice, 10*(2), 131–151.

Rahman, R. A., & Ali, F. H. M. (2006). Board, audit committee, culture and earnings management: Malaysian evidence. *Managerial Auditing Journal*, *21*(7), 783–804.

Salin, A. S. A. P., Manan, S. K. A., Kamaluddin, N., & Nawawi, A. (2017). The role of Islamic ethics to prevent corporate fraud. *International Journal of Business and Society, 18*(S1), 113–128.

Sarens, G., Beelde, I. D., & Everaert, P. (2009). Internal audit: A comfort provider to the audit committee. *The British Accounting Review*, *41*(2), 90–106.

Shariman, J., Nawawi, A., & Salin, A. S. A. P. (2018). Issues and concerns on statutory bodies and federal government – evidence from Malaysian Auditor General's report. *International Journal of Public Sector Performance Management, 4*(2), 251–265.

Shen, C. H., Luo, F., & Huang, D. (2015). Analysis of earnings management influence on the investment efficiency of listed Chinese companies. *Journal of Empirical Finance*, *34*, 60–78.

Shin, H. H., & Kim, Y. H. (2002). Agency costs and efficiency of business capital investment: Evidence from quarterly capital expenditures. *Journal of Corporate Finance*, *8*(2), 139–158.

Singam, K. (2003). Corporate governance in Malaysia. *Bond Law Review*, *15*(1), 314–344.

Suhaimi, N. S. A., Nawawi, A., & Salin, A. S. A. P. (2016). Impact of enterprise resource planning on management control system and accountants' role. *International Journal of Economics and Management*, *10*(1), 93–108.

Suhaimi, N. S. A., Nawawi, A., & Salin, A. S. A. P. (2017). Determinants and problems of successful ERP implementations – Malaysian experience. *International Journal of Advanced Operations Management, 9*(3), 207–223.

Sun, Y. (2016). Internal control weakness disclosure and firm investment. *Journal of Accounting, Auditing & Finance*, *31*(2), 277–307.

Sundgren, S., & Svanström, T. (2013). Audit office size, audit quality and audit pricing: Evidence from small- and medium-sized enterprises. *Accounting and Business Research, 43*(1), 31–55.

Suto, M. (2003). Capital structure and investment behaviour of Malaysian firms in the 1990s: A study of corporate governance before the crisis. *Corporate Governance: An International Review*, *11*(1), 25–39.

Tabachnick B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston: Pearson Education.

Tan, Y., Xu, N., Liu, X., & Zeng, C. (2015). Does forward-looking non-financial information consistently affect investment efficiency? *Nankai Business Review International*, *6*(1), 2–19.

Teoh, S. H., & Wong, T. J. (1993). Perceived auditor quality and the earnings response coefficient. *Accounting Review*, *68*(2), 346–366.

Tian, J. J., & Lau, C. M. (2001). Board composition, leadership structure and performance in Chinese shareholding companies. *Asia Pacific Journal of Management*, *18*(2), 245–263.

Verdi, R. S. (2006). *Financial reporting quality and investment efficiency.* Working paper, Massachusetts Institute of Technology.

Wahab, E. A. A., Gist, W. E., & Majid, W. Z. N. A. (2014). Characteristics of non-audit services and financial restatements in Malaysia. *Journal of Contemporary Accounting & Economics*, *10*(3), 225–247.

Wahab, E. A. A., Zain, M. M., & James, K. (2011). Audit fees in Malaysia: does corporate governance matter?. *Asian Academy of Management Journal of Accounting and Finance*, *7*(1), 1–27.

Watts, R. L., & Zimmerman, J. L. (1983). Agency problems, auditing, and the theory of the firm: Some evidence. *Journal of Law and Economics*, *26*(3), 613–633.

You, S. J., Tsai, Y. C. & Lin, Y. M. (2003). Managerial ownership, audit quality and earnings management. *Asia Pacific Management Review, 8*(3), 409–438.

Zakaria, K. M., Nawawi, A., & Salin, A. S. A. P (2016). Internal controls and fraud – empirical evidence from oil and gas company. *Journal of Financial Crime*, *23*(4), 1154–1168.

Assessing the Influence of Intrinsic Motivation on Academic Performance: A Study of Management Teachers

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ABSTRACT

Motivation of teachers has become a crucial issue in improving the quality of education. Different research studies have been performed to establish the association between teachers' motivation and their performance in academics but still some areas are left to be explored. This research was initiated to fill up this gap. The main purpose of this study was to assess the impact of intrinsic motivation on academic performance of management teachers. In the research, the respondents were drawn from different management colleges of NCR in India affiliated to Dr. A. P. J. Abdul Kalam Technical University. Partial Least Squares Structural Equation Modeling (PLS-SEM Analysis) was performed to draw the results. The results indicate that the intrinsic motivation of the teachers significantly affect their academic performance. Among the three intrinsic motivation factors that were considered for this research work, "creativity" is the strongest predictor of academic performance of the teachers. There are two major limitations of this research study; first one is the cultural dissimilarities prevailing at the different institutions from where the respondent belongs. Second is the trust on self-reported questionnaire data provided by the respondents. These limitations are discussed in more detail at the end of the paper. The results support the assessment that intrinsic factors of motivation are strong predictor of academic performance of teachers. This research study also indicates that "creativity" of a teacher is the strongest predictor of his or her performance among the other chosen factors. Therefore, Institutions may focus to enhance the "creativity" among the teachers for generating better academic performance.

Keywords: Creativity, intrinsic motivation, management, performance, teachers

INTRODUCTION

Over the past few years, some of the key universities have developed teaching excellence centers with an emphasis on supporting and developing teaching resources for establishing ideal teaching methods and practices. Due to this reason, quality education has become more vital concern in the academic world during past few years. Some researchers talk directly in relation to quality of teaching, and they are defining different measures to make improvement in it.

The quality of education is directly connected to the quality of instruction. Teacher is instrumental for better instruction. As we all know that teaching is the single profession that imparts learning to all the other professions and so, its significance and greatness is much higher. In educational field, motivation plays an incredible role. If teachers are having motivation for activity, this will promote a good performance and an increased level of output for sustaining the progress and development of whole nation as well as its citizens' welfare at large scale.

The dynamics of motivation have shifted radically to replicate new task requirements and reformed expectations of people. With these major changes, importance of psychic or intrinsic rewards has been increased, and the value of material or extrinsic rewards has been decreased. Intrinsic motivation, involved in spontaneous exploration and curiosity, is a fundamental idea in developmental psychology. Intrinsic motivation of teachers as well as students can create a great

difference in the level of education and will help in realizing the excellence. In this kind of motivation, inner attributes play a major role in behavior and performance outcomes because the person feels enjoyment and satisfaction in completing that task. An intrinsically motivated person is encouraged to put efforts for the challenge, enjoyment, or interest rather than due to external forces or benefits. Intrinsically motivated people voluntarily perform the activities in the absence of materialistic benefits or constraints. Dornyei (2001) defined teaching as a profession whose energy was supplied from intrinsic drives. It is also said that engaging learning experiences can be helpful in the improvement of intrinsic motivation level. A teacher should share the content in this manner that creates interest among the students and grabs their attention. Teacher can create interest in the subject by using different creative methods of teaching, which increase curiosity in the mind of students, but for this teacher should be intrinsically motivated to do so and he or she should feel inner satisfaction in such kind of efforts and outcomes.

It has been observed that the connection between individuals' intrinsic motivation and their performance outcomes has received very less empirical testing (Piccolo & Colquitt, 2006). Moreover, despite the importance of intrinsic motivation in quality education in an era of revolutionary change toward a more learning-oriented methodology, empirical research studies on intrinsic factors of teachers has received relatively very less attention. Accordingly,

the main objective of this research work was to examine the association between intrinsic motivation factors and academic performance of teachers from an extensive cross-section of management education with the objective of contributing to achieve the excellence in education.

LITERATURE REVIEW

The literature review provides insights into research work. For empirical investigation of the proposed research, the initial task was to identify the factors. For this purpose, various resources were scanned to identify the factors of intrinsic motivation and performance. The main purpose of scanning was finding out a pattern and a number of frequently expressed factors. Despite the extensive literature on motivational dynamics and performance of teachers, different areas are untouched that open various dimensions of study. Motivation can take either intrinsic or extrinsic forms. Intrinsic motivation remains an essential construct, which reflects natural human propensity to learn and integrate. Academic performance of teachers is the way they behave in the process of teaching and learning. When these two areas are examined together, they present a new insight.

Jesus and Lens (2005) said that motivation of teachers was an essential subject for education leaders and managers as it has a significant impact on motivation level of students. It is also significant for the improvement of educational scenario. Moran et al. (2001) focused on the distinction between extrinsic motivation, intrinsic motivation, and altruistic motives for choosing the teaching career. It is said that intrinsically motivated teachers focus on the advantages of the activities specifically related to teaching; they emphasize on the intrinsic satisfaction that they get from teaching activity. On the other side, extrinsically motivated teachers are more inclined toward other benefits such as time off, pay, and some kind of extrinsic rewards linked with the teaching career. Finally, a teacher with altruistic motives believes that the teaching is a profession that has social significance and honest desire to affect the growth and improvement of adolescents in a positive manner. Demir (2011) defined that intrinsic motivation of an individual was more positive and strong motivator in comparison to extrinsic motivation. It also confirms that teachers like their profession and they teach mostly because they have interest in teaching and they get something aesthetic from the teaching. Mohanty (2000) defined performance of teacher as the most vital input in the area of education. As per his views, teachers were feasibly the most significant part of any education system. Obilade (1999) concluded that teachers' work performance could be defined as the duties and responsibilities fulfilled by a teacher at a particular time in the education system for achieving objectives and goals. Afzal et al. (2010) conducted research study for examining the influence of motivation on academic performance. In this study, the value of R^2 was 80%, which indicates strong association of motivation and academic performance. Academic performance

intensifies between the ranges of 23% and 34% due to extrinsic motivation and intrinsic motivation and the overall model is significant at 5% level. The findings conclude that intrinsically motivated students perform much better academically than extrinsically motivated students. Mary (2010)'s study revealed the impact of intrinsic motivation on teachers' performance. Results found that a positive significant relationship exists between intrinsic motivation and teachers' performance indicating that the teachers' performance increases when level of intrinsic motivation goes up.

The first factor of intrinsic motivation selected in this research study is optimism. Different research studies have shown that optimism is an inherent factor of human beings that motivates them intrinsically. Hoy et al. (2008) explored teacher's sense of academic optimism. They claimed that teacher's academic optimism was a self-referent and positive belief regarding the teaching capacity, ability to develop trustworthy relationships with the students and their parents, and to put emphasis on academic responsibilities. In another way, teacher's academic optimism is only dormant factor that gives reflection of psychological state of an individual. This is the reason optimism motivates an individual intrinsically to engage in a particular task. Peterson and Chang (2003) acknowledged that optimism was an inherent factor of human beings defined in different ways. Smith and Crabbe (2000) found that optimism produced positive moods and acted as a motivating tool. The mood

that is experienced can influence the way individuals view life. The way we process information can be altered depending on the mood being experienced and this can affect our thoughts**.** Schulman (1999) concluded that optimism benefits comprised increased level of motivation, and greater achievement in different domains. Optimistic people differ in their attitude toward life and their perceptions of difficulties. The optimistic person is more inclined to accept hardship as a challenge, to have the capability of generating prospects and finding out resolutions from primary level problems, to contribute extra effort for skill improvement, sustain confidence level and determination, as well as optimists have the capacity to recover rapidly after a setback. Li and Wu (2011) defined that more optimistic people had a tendency to develop positive attitude toward their future situations and they believe that they are capable enough to move through adverse situations effectively.

Achievement motivation is the second factor considered as intrinsic motivation factor in this research work due to the importance of this factor in education field. This is frequently expressed as a variable of intrinsic motivation as per the review of literature. Achievement motivation can be well defined as the need for success or the attainment of excellence. One of the first researchers who showed an interest in achievement motivation was Henry Murray (1938). According to Murray, every human being had some inherently built universal needs and the need to achieve was one of them. Murray further explained

achievement motivation as a set of forces and efforts contributed by a person to move beyond the hurdles he or she faces and meet the ends as soon as he or she can. McClelland (1985) interchanged the concept of "achievement motivation" with the term "need for achievement." As per McClelland, need for achievement is one of the psychological drives that play a crucial role in success and achievement of a person. Shia (1998) conducted a research study on Academic Intrinsic and Extrinsic motivation and Metacognition. He selected two factors of intrinsic motivation: one was mastery goals and the other was need for achievement and found positive results. Goodman et al. (2011) conducted research study to examine the relationship of students' motivation level with their performance in academics. In his research study also he selected achievement motivation as a factor of intrinsic motivation. Pearson correlation coefficient was utilized to analyze the association between variables and results indicated significant relationship between intrinsic motivation and their academic performance. Multiple regression analysis run on the data resulted that intrinsic motivation of individuals is the most significant predictor of their performance in academics. Peretomode (2001) also supported the concept of intrinsic motivation in individuals and selected achievement motivation as intrinsic factor of motivation as well as its impact on performance outcomes. He considered that it was the satisfaction of these intrinsic factors (or higher-order needs like recognition, achievement) that will encourage the growth and development of managerial effectiveness at the higher levels.

The third factor of intrinsic motivation considered in this research study is creativity. Creativity of individuals plays a very important role in their performance. Arthur Schawlow (1981), winner of the Nobel Prize, stated that creativity of an individual was his or her natural quality that is generated mostly through intrinsic factors and it affects the outcomes. Guilford (1967) contributed in research on creativity and he was the first person to highlight the significance of creativity in performance. He proposed that creativity includes divergent thinking rather than convergent thinking. He was the first to promote creativity as scientific concept of human state that can be measured. Learner-Centered Work Group of American Psychological Association's Board of Education Affairs (1997) focused on 14 psychological factors that are primarily internal factors; intrinsic motivation is one of them. According to this Group, flexible and insightful thinking, curiosity and creativity are major factors of intrinsic motivation of learners. Amabile (1985) stated that there were abundant evidences that individual's creativity will be maximum when they are predominantly intrinsically motivated as compared to extrinsically motivated. Hennessey (2003) concluded that motivation had key importance in the creative processes of individuals. It is not sufficient to have higher levels of skill sets or a strong conceptual understanding in individuals. Individuals, who approach assigned work with intrinsic motivation,

will be able to reach their creative potential; individuals must involve themselves in that work for the complete enjoyment and pleasure associated with the activity in place of some outside achievement expectations. Research indicated that when individuals were offered more freedom, opportunities for self-expression, and chances to be creative, they were more motivated to learn (Zinn, 2008).

From the literature review, it is coming out that the researchers have emphasized on one or two intrinsic variables for performance. For instance, Hoy et al. (2008) worked on "Optimism" or Amabile worked on "Creativity." It is clear that there are more than one inner attributes that are responsible for individual's performance. It appears that the issue of intrinsic factors or inner behavioral attributes has not been examined in a comprehensive manner. The proposed research proceeds to investigate this gap and examine the effect of these intrinsic motivation factors on performance of teachers in academics.

Objectives

The main objective of this research is to study how the teachers' performance is caused by the core construct of intrinsic factors of teachers irrespective of the environment in which they are working. The proposed research aims at:

- To identify the intrinsic factors that enforces intrinsic motivation of teachers.

- To measure the impact of intrinsic

motivation factors on academic performance of teachers.

Hypothesis

The proposed study is based on the hypothesis that:

H_1: Intrinsic motivation factors influence significantly the overall academic performance of the management teachers.

Sub-hypotheses:

$H_{1(1)}$: "Achievement motivation" factor influences significantly the overall academic performance of the management teachers.

$H_{1(2)}$: "Creativity" factor influences significantly the overall academic performance of the management teachers.

$H_{1(3)}$: "Optimism" factor influences significantly the overall academic performance of the management teachers.

METHODS

This research work has been conducted to measure the relative significance of intrinsic factors of motivation in the teachers' academic performance. The research work was conducted in the perspective of management education of different colleges in NCR, India, affiliated with Dr. A.P.J. Abdul Kalam Technical University, India. The responses were collected with the help of research questionnaire from 300 teachers associated with different colleges running

management courses. Sampling technique used in this research work was multistage cluster sampling at first level, after that simple random sampling was used for data collection. The selection of teachers from specific cluster was based on relevant weightage in target population. Statistical analysis was done on 280 questionnaires completely filled by the respondents and total 20 questionnaires were rejected because of partial information.

Measures

In the research questionnaire, all questions were formulated on a 5-point Likert scale measuring the responses on range from 1 to 5 (*strongly disagree* to *strongly* agree).

Independent variables. On the basis of review of literature, three frequently expressed intrinsic factors of motivation have been selected for study, that is, achievement motivation, creativity, and optimism. As per the formulated hypothesis, these intrinsic factors influence performance outcomes of management teachers. Optimism was measured by five items in questionnaire. Sample item is "I often start out expecting the worst, even though I will probably do OK." Creativity factor was measured by seven items and achievement motivation was also measured by total seven items in the questionnaire. Sample items are "I feel satisfaction after working on my creative ideas for a designated period of time" and "Doing something better than I have done in the past is very satisfying," respectively.

Dependent variable. Academic performance of teachers was measured by total seven items in the questionnaire based of teaching learning activities performed by teachers. Sample item is "I serve as a mentor and motivator for students."

RESULTS

At the first level of analysis, Cronbach's alpha was utilized to evaluate the internal consistency reliability of the data collection instrument questionnaire. Alpha coefficient ranges in value from 0 to 1. The instrument is considered reliable, if cronbach's alpha value is > 0.7. In this study, the calculated cronbach's alpha value is >0.7 for each factor and thus the instrument was considered reliable for the study.

To analyze the data and calculate the result outcomes, structural equation modeling technique was used in this research study. PLS-SEM Analysis (Partial Least Squares Structural Equation Modeling) was performed by utilizing Smart PLS. Two submodels are there in a structural equation model; first one is the inner model that specifies the relationship between the dependent and independent latent variables, on the other hand, the outer model specifies the relationship between the latent variables in study and their observed indicators.

Kinetic Analysis

Conceptual Background. All the three constructs selected for the research study are conceptually associated to each other by the means of structural model as shown in Figure 1.
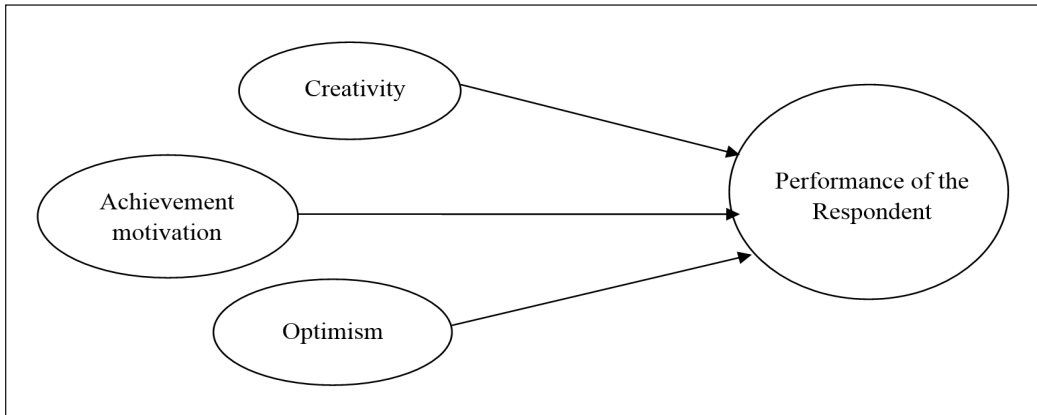
Figure 1. Structural model

The association among the constructs (creativity, achievement motivation, and optimism) under consideration was evaluated and interpreted by utilizing the partial least squares path-modeling algorithm. The smart PLS is employed especially as it allows the estimation of both the models simultaneously; measurement model as well as structural model (Ringle et al., 2005). In this research, the partial least squares (PLS) model was examined and interpreted in two phases. In the first phase, measurement model was implied to evaluate the relationship between observed items and latent variables and in the next phase structural model was assessed to specify the relationship between latent variables.

The utilization of measurement model was to ensure that only valid and reliable constructs' measures are utilized for the assessment of relationship patterns in the complete model (Hulland, 1999). Path coefficients among the constructs are indicators of predictive power of a model.

Measurement Model

PLS algorithm was applied to identify the relationships between the constructs of performance of respondents, creativity, achievement motivation, and optimism. The loading values and coefficients are shown in Figure 2.

In PLS, loading of respective factors on their respective latent constructs are examined to measure the reliability of the factors (Hulland, 1999). Since the final model was decided after dropping out insignificant factors having factor loadings of less than 0.5, the model was analyzed by using Smart PLS 3.0. The final path model was represented in Figure 3.
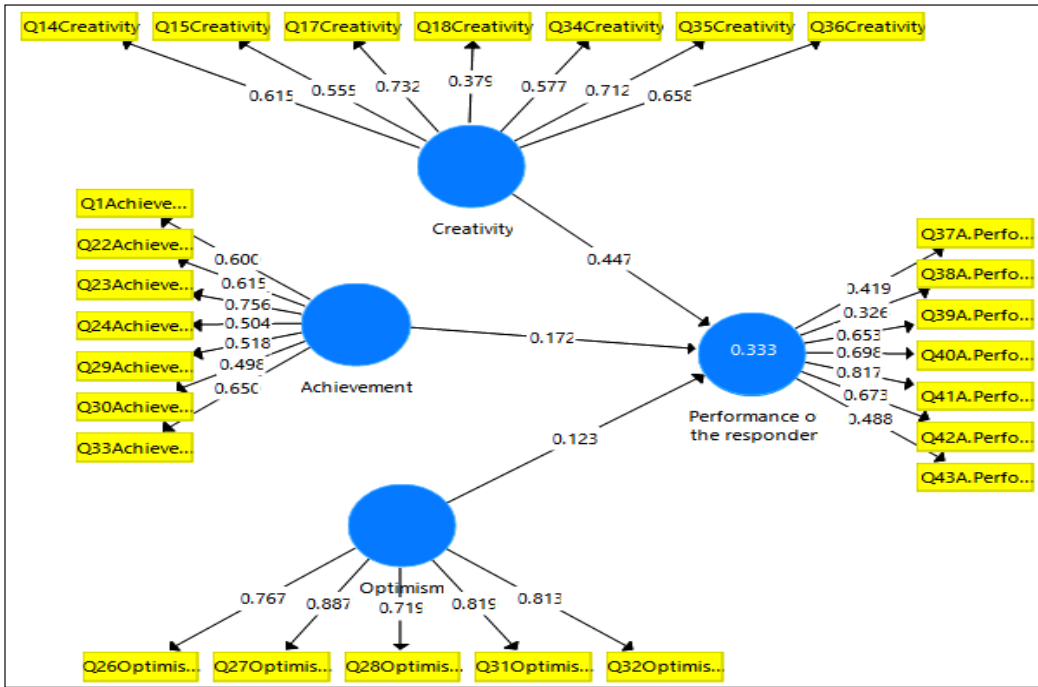
Figure 2. Kinetic relationship
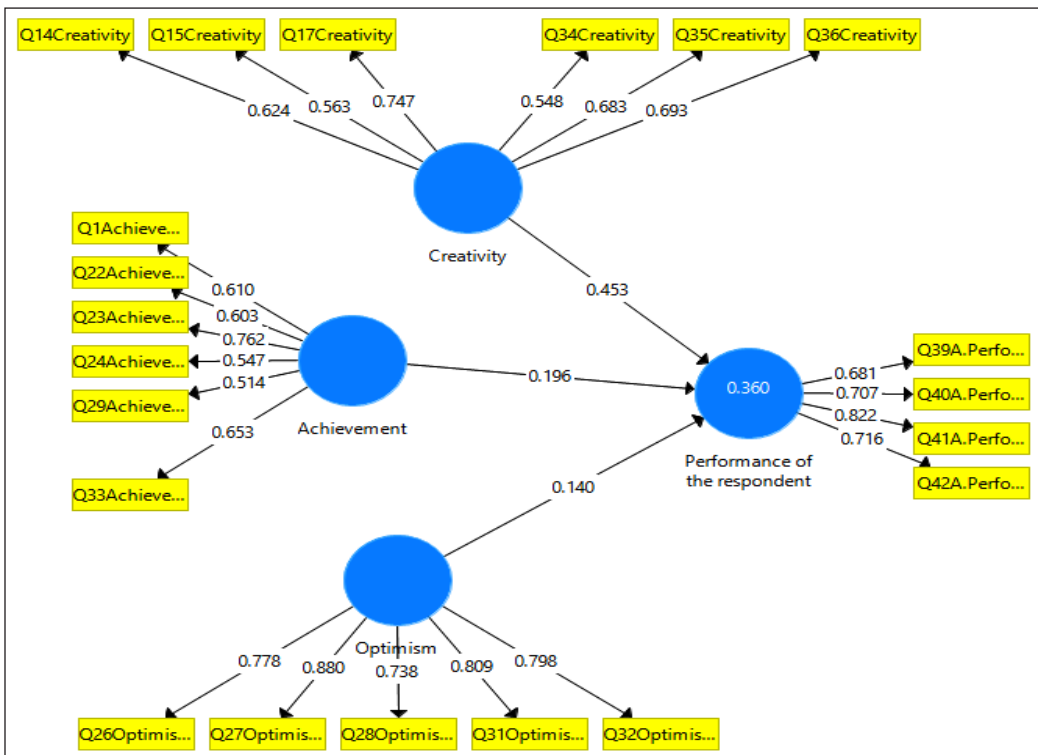
Figure 3. Showing the final path model

Preliminary Observations

Target Endogenous Variable Variance. The coefficient of determination, R^2, is 0.360 for the performance of the respondents, latent variable of the study. It means that the three latent variables (creativity, achievement motivation, and optimism) moderately explain 36% of the variance in performance of the respondents.

Inner Model Path Coefficient Size and Significance. The inner model recommends that creativity has the most significant impact on performance (0.453) followed by achievement motivation (0.196) and optimism (0.140). The hypothesized path relationships among creativity, achievement motivation, optimism, and academic performance is statistically significant. Thus, we conclude that creativity, achievement motivation, and optimism are moderately strong predictors of performance.

Indicator Reliability. In this study, the reliability of variables was assessed through Fornell and Larcker's (1981) composite reliability measures. In the study, the composite reliability coefficients of the constructs ranges from 0.786 to 0.900 (Table 1), which fulfills the standard of 0.70 as suggested by Fornell and Larcker (1981). The factor loadings, Cronbach's alpha, composite reliability, and average variance extracted (AVE) values calculated by PLS algorithms are tabulated in Table 1.

Table 1
Measurement of reliability

	Cronbach's alpha	rho_A	Composite reliability	AVE
Achievement motivation	0.684	0.670	0.786	0.584
Creativity	0.730	0.750	0.810	0.519
Optimism	0.861	0.863	0.900	0.643
Performance of the respondents	0.711	0.718	0.822	0.538

Internal Consistency Reliability. Traditionally, "Cronbach's alpha" is used to measure internal consistency reliability in social science research but it tends to provide a conservative measurement in PLS-SEM. Previous literature has suggested the use of "composite Reliability" as a replacement (Bagozzi & Yi, 1988; Hair et al., 2012). From Table 1, such values are shown to be larger than 0.6, so high levels of internal consistency reliability have been demonstrated among all three reflective latent variables.

Convergent Validity. Results indicated that the variance extracted for four scales ranged from 0.519 to 0.643 (Table 1). This demonstrates that the scales used for achievement motivation, creativity, optimism, and performance possessed convergent validity.

Discriminant Validity. It is clearly evident from Table 2 that the discriminant validity is adequate as the constructs have an AVE loading greater than 0.5. In addition, it is also confirmed as the diagonal elements are significantly higher than the off-diagonal values in the corresponding rows and columns. The results evident that all the constructs possess discriminant validity.

Table 2
Discriminant validity

	Achievement	Creativity	Optimism	Performance of the respondents
Achievement motivation	0.764			
Creativity	0.365	0.720		
Optimism	0.223	0.148	0.802	
Performance of the respondents	0.393	0.546	0.251	0.733

Structural Model Analysis
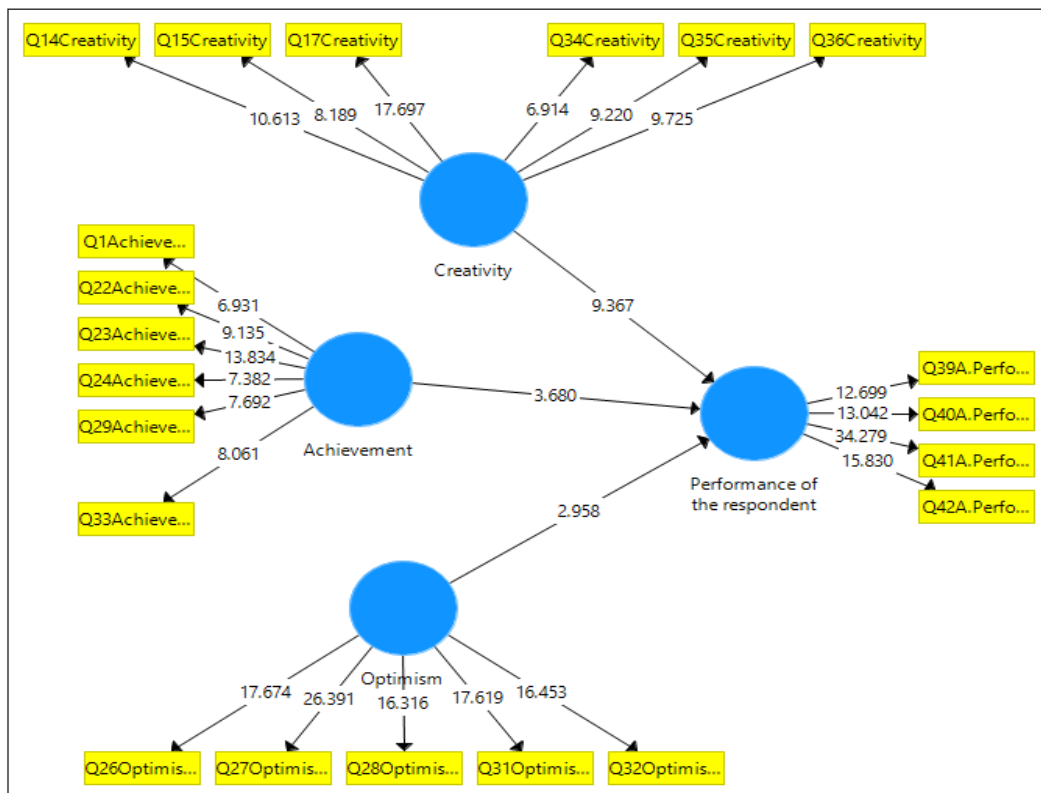
Figure 4. Path significance in bootstrapping

Table 3
Showing the path coefficients along with their bootstrap values, 'T'

	Original Sample (O)	Sample Mean (M)	Standard Deviation (SD)	T Statistics (|O/SD|)	p values
Achievement motivation -> Performance of the respondent	0.196	0.204	0.053	3.680	0.000
Creativity -> Performance of the respondent	0.453	0.463	0.048	9.367	0.000
Optimism -> Performance of the respondent	0.140	0.143	0.047	2.958	0.003

Table 3 clearly indicates that the path coefficients in the inner model are statistically significant as their value of *T*-statistics is larger than 1.96. The relationship between performance and achievement motivation of the faculty respondent was significant, as value of $\beta = 0.196$ and $t = 3.680$, which indicate that achievement motivation has direct, positive, and moderate influence on the performance of the teachers. The performance of respondents changes in direct proportion to achievement motivation with a coefficient of 0.196. This also indicates that a 100 points change in achievement motivation will bring 19.6 points change in the performance of the respondents.

The relationship between creativity and performance was again significant as $\beta = 0.453$ and corresponding *t* value = 9.367, which indicates direct and positive significant influence of creativity on the performance of the teachers. The performance changes in direct proportion to creativity with a coefficient of 0.453, which indicates that a 100-point change in creativity will bring 45.3 points change in the performance of the teachers.

Similarly, the relationship between optimism and performance of teachers was again significant with $\beta = 0.140$ and $t = 2.958$. This indicates that the optimism has direct, positive, and moderate influence on the performance.

Summary of Kinetic analysis. The three paths used to connect the measures in the structural model, are supporting the hypothesis, that intrinsic motivation factors: creativity, achievement motivation and optimism significantly influence the performance of management teachers.

DISCUSSION

In this research study, it is revealed that members of teaching fraternity are found to care about creativity, achievement motivation, and optimism with loading of 0.453, 0.196, and 0.140, respectively; as they are good indicators of performance in terms of teaching learning activities. "*T* values" shown in Table 3 also supports the significant positive relationship between selected intrinsic motivation factors and performance of teachers. Therefore, the hypothesis "Intrinsic motivation factors

influence significantly the overall academic performance of the Management teachers" is accepted.

The observation also gets supported with the findings of Lemos and Verissimo (2014) work, to investigate the relationships between intrinsic motivation and extrinsic motivation and their effects on academic learning and achievement. Results supported that intrinsic motivation and extrinsic motivation can exist in parallel manner and these are not contradictory, whereas intrinsic motivation was increasingly associated for better academic achievement. Taylor et al. (2014) also defined a very important role of intrinsic motivation in predicting academic achievement. The empirical study has shown that intrinsic motivation was the only motivation type to be consistently positively associated with academic achievement.

Limitations

The first limitation includes the assumption about the work environment in which teachers of Dr. A.P.J Abdul Kalam Technical University, India are serving. The research assumes that the working environment in all the colleges of the university are same. Certainly, there can be variation in the service conditions and work environment, especially when micro-level differences are considered with in the context of same university. The second limitation is dependence on self-conveyed responses of the management teachers.

CONCLUSION

Intrinsic motivation of teachers can create a great difference in the level of education and may help in realizing the excellence. The objective of this research paper was to assess the impact of intrinsic motivation factors on academic performance of teachers in management education. The findings have shown significant relationship between intrinsic motivation and academic performance of teachers. The results clearly indicate that intrinsic motivation factors influence academic performance of teachers significantly and the analysis of inner model shows that creativity alone can explain nearly 45% of the variance in performance of the teachers.

Contribution

Based on the stated objective and findings, this research contributes in education world with unique knowledge that can be utilized for improving quality of education. The findings of this study contribute to education services, where the students, teachers, and affiliating institutions are the three important pillars for ensuring the success. A teacher has to serve as a mentor and motivator to his or her students. It has been observed throughout the study that successful academic performance of a teacher depends on how he or she feel motivated internally. Institutions should think seriously to imply those measures in practice, by means of which the inner urge of creativity of a teacher could be addressed positively for the benefits of

students' learning as creativity has come out in the form of major predictor of academic performance.

REFERENCES

Afzal, H., Ali, I., Khan, M. A., & Hamid, K. (2010). A study of university students' motivation and its relationship with their academic performance. *International Journal of Business and Management, 5* (4), 80-88.

Amabile, T. M. (1985). Motivation and creativity: Effects of motivational orientation on creative writer. *Journal of Personality and Social Psychology, 48*(2), 393–399.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science, 16*(1), 74–94.

Carmines, E. G., & Zeller, R. A. (1979*). Reliability and validity assessment (quantitative applications in the social sciences)*. New York, NY: Sage Publications.

Chin, W. (1998). *The partial least squares approach for structural equation modeling*. In G. A. Marcoulides (ed.), *Modern methods for business research* (pp. 295–336). London: L a w r e n c e Erlbaum Associates.

Demir, K. (2011). Teachers' intrinsic and extrinsic motivation as predictors of student engagement. *New World Sciences Academy, 6*(2), 1397–1409.

Dornyei, Z. (2001). *Motivational strategies in the language classroom Cambridge language teaching library*. Cambridge, UK: Cambridge University Press.

Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Goodman, S., Jaffer, T., Keresztesi, M., & Schlechter, A. F. (2011). An investigation of the relationship between students' motivation and academic performance as mediated by effort. *South African Journal of Psychology, 41*(3), 373–385.

Guilford, J. P. (1967). *The nature of human intelligence*. New York, NY: McGraw-Hill.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science, 40* (3), 414–433.

Hennessey, B. A. (2003). The social psychology of creativity. *Scandinavian Journal of Educational Research, 47*(3), 253–271.

Henry, B. B. (2003). *Frequency of use of constructivist teaching strategies: Effect on academic performance, student social behavior, and relationship to class size* (unpublished Doctoral thesis), University of Central Florida Orlando, Florida.

Hoy, A. W., Hoy, W. K., & Kurz, N. M. (2008). Teacher's academic optimism: The development and test of a new construct. *Teaching and Teacher Education, 24*(4), 821–835.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A R e v i e w of four recent studies. *Strategic Management Journal, 20*(2), 195–204.

Jesus, S., & Lens, W. (2005). An integrated model for the study of Teacher motivation. *Applied Psychology, 54*(1), 119–134.

Krebs, D., Berger, M., & Ferligoj, A. (2000). Approaching achievement motivation – Comparing factor analysis and cluster analysis. *New Approaches in Applied Statistics, 16*, 147–171.

Kumar, V. K., & Holman, E. R. (1997). *The Creativity Styles Questionnaire-Revised*. (Unpublished Psychological Test). Department of Psychology, West Chester University of Pennsylvania, West Chester, PA 19383.

Learner-Centered Psychological Principles: A Framework for School Reform. Prepared by the Learner-Centered Work Group of the American Psychological Association's Board of Education Affairs, November, 1997. Retrieved April 3, 2017, from www.apa.org.

Lemos, M. S., & Veríssimo, L. (2014). The relationships between intrinsic motivation, extrinsic motivation, and achievement, along elementary school. *Procedia-Social and Behavioral Sciences*, *112*, 930–-938.

Li, C. H., & Wu, J. J. (2011). The structural relationships between optimism and innovative behavior: Understanding potential antecedents and mediating effects. *Creativity Research Journal, 23*(2), 119–128.

Mary, A. (2010). *Motivation and the performance of primary school teachers in Uganda: A case of Kimaanya-Kyabakuza division, Masaka District* (Unpublished Master thesis), Makerere University, Uganda.

McClelland, D. (1985). *Human motivation*. New York, NY: Scott Foresman.

Mohanty J. (2000). *Current trends in higher education.* New Delhi: Deep and Deep Publications.

Moran, A., Kilpatrick, R., Abbott, L., Dallat, J., & McClune, B. (2001). Training to teach: Motivation factors and implications for recruitment. *Evaluation and Research in Education, 15*(1), 17–32.

Murray, H. A. (1938). *Explorations in personality*. New York, NY: Oxford University Press.

Obilade, S. O. (1999). *Leadership qualities and styles as they relate to instructional productivity* (pp. 25–32). The Manager Ibadan: Department of Educational Management, University of Ibadan.

Peretomode, V. (2001). *Educational administration: Applied concepts and theoretical perspectives*. Lagos, Nigeria: Joja Publishers.

Peterson, C., & Chang, E.C. (2003). *Optimism and flourishing*. In C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 55–79). Washington, DC: American Psychological Association.

Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal, 49*(2), 327–340. doi:10.5465/AMJ.2006.20786079

Ringle, C., Wende, S., & Will, A. (2005). *Customer segmentation with FIMIX-PLS*. In T. Aluja, J. Casanovas, V. Esposito Vinzi, A. Morineau, & M. Tenenhaus (Eds.), Proceedings of PLS-05 International Symposium, SPAD Test & go, Paris, pp. 507–514.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism and trait anxiety, self-mastery, and self-esteem: A re-evaluation of the life orientation test. *Journal of Personality and Social Psychology*, *67*(6), 1063–1078.

Schulman, P. (1999). Applying learned optimism to increase sales productivity. *Journal of Personal Selling and Sales Management, 19*(1), 31–37.

Shia M. R. (1998). *Assessing Academic Intrinsic Motivation: A Look at Student Goals and Personal Strategy, wheeling Jesuit University.* Retrieved April 3, 2017, from http://www.cet.edu/pdf/motivation.pdf

Smith, J. C., & Crabbe, J. B. (2000). Emotion and exercise. In Buckworth, J. & Dishman, R. K. (2002). *Exercise psychology.* Champaign, IL: Human Kinetics.

Taylor, G., Jungert, T., Mageau, G. A., Schattke, K., Dedic, H., Rosenfield, S., & Koestner, R. (2014). A self-determination theory approach to predicting school achievement over time: The unique role of intrinsic motivation. *Contemporary Educational Psychology, 39*(4), 342–358.

Zinn, W. (2008). Making fun of school, or why does learning have to be such a drag? Six key elements for motivating learning. *International Journal of Learning, 15*(8), 153–160.

Peer Assessment in Higher Education: Using Hofstede's Cultural Dimensions to Identify Perspectives of Malaysian Chinese Students

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ABSTRACT

Peer assessments have been widely used as a method of assessment and teaching. Earlier studies have established its benefits and validity in higher education as a learner-centered assessment and learning process. However, there is little investigation conducted from the cultural perspective, especially in a non-Western setting. The present study aims to fill this gap by using Hofstede's cultural theory to identify the perspectives of Malaysian Chinese undergraduates on peer assessment. A homogeneous sample of 43 Malaysian Chinese students from a private university in Malaysia who were pursuing a degree program in mass communication participated in focus group discussions. Using thematic analysis, six themes were generated from the data. This study found that participants displayed high power distance, high levels of uncertainty avoidance, and preference for long-term gains. The participants' perception fit into Hofstede's collectivist and feminist dimensions. Results showed that undergraduates perceived teachers to be more qualified in awarding scores compared to peers. Students considered awarding higher scores to those whom they considered as friends, and higher marks to peers who were popular. They also displayed face-saving behaviors to avoid embarrassing their peers in giving them feedback. By using peer assessments, there was increased motivation and responsibility toward the project. Students also appreciated peer feedback for long-term self-improvement.

Keywords: Evaluation, marking, measurement, mass communication, Malaysia

INTRODUCTION

Peer assessment has emerged as a popular approach especially in institutions of higher learning (Friedman, Cox, & Maher, 2007; Lindblom-ylänne, Pihlajamäki, & Kotkas, 2006; Speer, 2010). In this information age, computer-aided or online peer assessment methods are widely used to facilitate such assessments in regular and online courses (Chen & Tsai, 2009; Chew, Snee, & Price, 2016; Li et al., 2016). Peer assessment is a form of learner-centered assessment conducted by students that is necessary for effective teaching and learning. In fact, Llado et al. (2014) posit that peer assessment is a "learning procedure." It is defined as ''… an arrangement in which individuals consider the amount, level, value, worth, quality or success of the products or outcomes of learning of peers of similar status'' (Topping, 1998, p. 250). In some reports, peer assessments were referred to as self-assessments because students administer the evaluations themselves (Reinholz, 2016). Researchers discussed peer assessment from the perspectives of learning empowerment (Chew et al., 2016), task complexity (Zundert, Dominique, Sluijsmans, Könings, & Merriënboer, 2012), fairness (Fellenz, 2006), social style bias (May, 2008), and comparisons with teacher assessments (Falchikov & Goldfinch, 2000; Li et al., 2016) among others. This method of assessment has been tested on university and college students from various disciplines such as English language (Warwick, 2007), management (Baker, 2008; Friedman et al., 2007), entrepreneurship (Kotey, 2007),

engineering (Montalvão & Baker, 2015), and nursing (Bradbury-Jones, Sambrook, & Irvine, 2009; Pereira, Echeazarra, Sanz-Santamaría, & Gutiérrez, 2014).

Although the execution of peer assessment was found to be more challenging compared to teacher assessments (Greenan, Humphreys, & McIlveen, 1997), it is a flexible method of assessment that can be customized to evaluate students' work. It is a suitable method of assessment to grade oral or written work (Topping, 2009). Studies have reported using this method to assess oral presentations (Montalvão & Baker, 2015), experiment proposals (Sung, Lin, Lee, & Chang, 2003), term papers (Haaga, 1993), singing (Latukefu, 2010), debates (Smith, 1990), and research posters (Edgerton & McKechnie, 2002) successfully.

Despite its wide application and coverage, there exists a knowledge gap in identifying the perception of students from different cultural backgrounds on peer assessments (McLeay & Wesson, 2014). Culture could affect the teaching and learning process in universities. Culture is defined as a "collective programming" of the people in a certain group that distinguishes them from people from other groups (Hofstede, 1980a). Members from that group share common values, beliefs, and meanings interpreted from their own shared experiences (House, Hanges, Javidan, Dorfman, & Gupta, 2004) and they are carried across generations (House et al., 2004). Understanding a culture is helpful for teaching because it could help teachers create a good learning environment

(Bonham, Cifuentes, & Murphy, 1995) for the students. The cultural context is also a factor that determines a person's perception of the appropriate behavior in the learning situation (Markus & Kitayama, 1991).

Tinto (1998) showed the importance of both academic and social integration in ensuring success in higher education. Students needed to participate and adapted to the student culture and the environment in order to be successful in the university (Tinto, 1998). Teachers also need to be culturally sensitive and responsive to help students along in their academic achievements (Collins, 1999; Kainzbauer & Hunt, 2014). It was also found that students from different cultures had different preferences in learning styles (Joy & Kolb, 2009). For example, one study found that international students were dissatisfied with the peer assessment system, this could be due to the culture shock in a learning system that was different from what they were familiar with (Warwick, 2007). Furthermore, past research in the area of peer assessments were mostly done in the Western settings and peer assessments may not be suitable in countries with examination cultures like some Asian countries (Bryant & Carless, 2010). One way to learn about a culture is to examine the ways people solve problems (Schein, 1985). Therefore, using a cultural theory to identify the perspectives of students in the peer assessment process is useful to help teachers plan, adapt, and create a positive environment for teaching and learning.

Objectives

The present study aims to fill the knowledge gap in current debate to identify students' perception of peer assessment in a non-Western setting using Hofstede's model. This study applies Hofstede's model in an attempt to identify the cultural dimensions within the perspectives of Malaysian Chinese undergraduates on the use of peer assessments in a group project. Hofstede's model is typically used to make quantified comparisons of cultures of different nations. Therefore, this study attempts to contribute to the body of knowledge by providing rich qualitative insights to Hofstede's cultural dimensions from the perspectives of undergraduates within one nation. The use of a model in qualitative inquiry serves as a "realizable goal" as "it helps indicate to the extent to which the inductive analysis has emerged" (Smith, Larkin, & Flowers, 2009).

The context of this study is unique as Malaysia is a multicultural country that is governed and inhabited by diverse ethnic groups namely Bumiputera (68.8%), Chinese (23.2%), Indian (7%), and others (1%) (Department of Statistics, Malaysia, 2017). The Malaysian population is predominantly Bumiputera comprising mainly ethnic Malay and indigenous groups. In everyday life, people are generally aware and sensitive of the different cultural practices, values, and beliefs. Teachers are held in high regard among the Malaysian Chinese community. Some Malaysian Chinese students would also gesture a slight bow when they see a teacher. Meanwhile, not acknowledging a teacher when they see one is considered

disrespectful. In everyday interactions, it could be considered disrespectful if a younger person disagrees or questions the authority. Teachers and elderly persons, or those with high social standing are considered people of authority. In addition, maintaining harmony in social interactions and communication is appreciated over confrontational, aggressive, or negative behaviors. Confrontational, aggressive, and negative behaviors are frowned upon and considered disrespectful and disruptive. Such behaviors are considered to be possible indications of the individual's lack of education and proper upbringing. Meanwhile, behaviors that reflect tolerance, including tolerance toward bad behaviors would earn the individual much respect from others.

In Malaysia, the context in a private university is somewhat different from a public one that is fully or partially government funded, because the undergraduates pay relatively higher fees. This would mean that the students who are less affluent would have to take up student loans, if they do not have scholarships. This situation puts some pressure on the undergraduates to maintain their grades as most loans require students to achieve and maintain a certain standard of academic performance. Therefore, it is safe to say that grading and assessments in this university are not only important for reflecting the students' academic achievements but also for some, survival.

Hofstede's Model

Hofstede's model is the "benchmark for discussion of national cultures and values" (McLeay & Wesson, 2014) and it has been tested and applied in many studies is an influential model (Kirkman, Lowe, & Gibson, 2006). The model has been used since 1980 and it is still relevant in the present day (Baptista & Oliveira, 2015). Kirkman et al. (2006), who reported a meta-analysis of Hofstede's framework, found a total 180 empirical studies done from 1980 to 2002 using Hofstede's framework. It has also been widely tested and cited in the studies in areas of education, teaching, and learning (McLeay & Wesson, 2014) such as learning styles (Warwick, 2007) and cross-cultural education (Kainzbauer & Hunt, 2014; Tinto, 1998).

Hofstede's model was built on the cultural dimensions which he had theorized which could be used to explain the different behavioral patterns among people from different nations (Williamson, 2001). The dimensions are power distance, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance, long- versus short-term orientation, and indulgence versus restraint (Hofstede, 2001). Hofstede's model advances our understanding about the differences in collective behaviors among individuals from different nations. Hofstede's theory has sociological underpinnings of functionalism and positivism. His taxonomy is based on generalized behavior patterns and provides a useful guide to teachers, marketers,

innovators and other groups of people in planning a generic approach that appeals to most members in that nation.

Hofstede's framework measures the different behaviors of people from different nations (Hofstede, Hofstede, & Minkov, 2010). First, power distance is the degree to which those with less power accept and expect the unequal distribution of power (Hofstede, 1980a). The different forms of reliance on authority (Singh, 1990) are reflected in the power distance. Meanwhile, individualism versus collectivism is the degree to which the individual's (individualist) or the group's (collectivist) welfare is prioritized over the other (Hofstede, 1980a). A collectivist culture exists within a close-knit community whereby members in the group are loyal to each other (Hofstede, 1980b). In a collectivist culture, members of a group care for each other and take responsibility for one another (Gudykunst et al., 1996) as opposed to an individualistic culture whereby the individual is only responsible for himself or herself and his or her immediate family. Third, masculinity concerns the assertiveness and competitiveness versus femininity that concerns modesty. In a masculine culture, the roles of men and women are different whereby men are assertive, tough, and success-driven while women are more emotional, modest, caring, and focused on the quality of life (Hofstede, Hofstede, & Minkov, 2010). In a feminine society, both men and women take on the feminist role (Hofstede, Hofstede, & Minkov, 2010). The

fourth dimension is uncertainty avoidance. It is the degree of tolerance for and acceptance of future events, whereby societies with high tolerance would be open to alternatives and plurality while those with lower tolerance would respond in a more controlled manner and follow existing rules (Hofstede, 1980a). A culture with high uncertainty avoidance dislikes change and novelty, preferring consensus and conservatism (Hofstede, 1980a). Finally, societies with a long-term orientation would value delayed gratification while those with a short-term orientation would value quick results (Hofstede, 2001).

Hofstede's model has been criticized because it provided homogenous descriptions of group cultures and produced predictable (Bhimani, Gosselin, & Ncube, 2005), weak (McSweeney, 2002) and oversimplified conclusions (Signorini, Wiesemes, & Murphy, 2009). Another limitation of Hofstede's taxonomy is that it was designed for the application on large communities and economies (Hofstede, 2001), not individuals. Despite that, many studies have been conducted at the individual level (Kirkman et al., 2006). A later study proved that the theory could be effectively applied at the micro-level in a single nation (Mazanec, Crotts, Gursoy, & Lu, 2015). Given its limitations, Hofstede's model is useful in the present qualitative study as the categories of cultural characteristics provide general indications to identify the Malaysian undergraduates' perspectives on peer assessment. With its roots in anthropology, the theory also helps

us understand the ways people behave and how to measure culture that is complex and multidimensional (Soares, Farhangmehr, & Shoham, 2007).

METHODS

The participants of this study were recruited from a class of 215 undergraduates who had used the peer assessment method when they underwent two courses on event planning and event management in a private university in Malaysia. The courses were offered over two consecutive semesters (about 9 months) from October 2014 to June 2015. The event planning and event management courses were compulsory courses carrying three credits each. For both courses, the peer assessment component was the only component that scored the students' performance as an individual. The remaining assessment components contributed to shared group score. Students were required to work in groups to plan and organize events in campus and off campus within the two semesters. The students divided themselves into five project groups and each had its own leader and working committee. In beginning of the first course, the class was briefed about the methods and criteria of course assessment for both courses. This included the peer assessment method and criteria. Topping (2009) recommended the procedures for executing this method of assessment to involve briefing the students on the process and criteria for grading before asking them to review the work or performance and providing written grades

and feedback using a set of criteria given by teacher that is comparable to that of a teacher assessment.

After the students completed the peer assessment exercise in April 2015, the researchers recruited one of the five project groups comprising 43 students to participate in the study. The students who enrolled in the course were predominantly Chinese. Data were collected from six focus groups comprising a total of 43 second-year Malaysian Chinese students. In the six focus groups, there were nine male and 34 female Malaysian Chinese participants aged between 20 and 21 years.

Focus group discussions were employed because the participants were homogeneous and had similar experience (Patton, 2002) in doing the peer assessment exercise, making the inquiry more focused. Furthermore, group discussions could yield results that are greater than the sum of in-depth interviews with the individuals (Carson, Gilmore, Perry, & Gronhaug, 2001; Roller & Lavrakas, 2015). Each focus group was a full focus group comprising between 7 and 10 participants (Roller & Lavrakas, 2015). To manage the challenges of soliciting narratives in focus group discussions, the researchers selected facilitators for the focus group discussion from the participants themselves. The participants were familiar to the researchers as one researcher was the lead lecturer for both the courses in which the participants were enrolled, another researcher was the former lead lecturer for the courses so she served as an advisor to the students and the lead lecturer, and the

last researcher was a tutor. The arrangement to have the participant facilitators play a dual role was to encourage a more open discussion as they were familiar with one another. Hence, the facilitators and participants share common awareness and understanding of the context, culture, and issues. Within their familiar circle, participants are able to reveal and share their intimate experiences and perspectives in the discussion.

The researchers had obtained ethical approval from the university to conduct the study. Before the start of the focus group discussion, the participants were briefed about the research and invited to sign the informed consent form. They were informed that their participation was voluntary and that the information revealed would only be used for academic research purposes and their identities would not be revealed. The participants also gave their consent for the discussions to be recorded. The focus group discussions were held at the participants' convenience after their group meeting. Most of them experienced conducting peer assessments for the first time in university when they underwent the event planning and event management courses.

One facilitator was assigned to each group. Each focus group discussion lasted between 45 and 130 min. The researchers had trained the facilitators earlier and provided them with a list of semi-structured questions with probes. The questions were designed to elicit information about their perspectives in the peer assessment exercise without imposing a priori theoretical

constructs. For example, some of the main questions and probes that are descriptive, narrative, evaluative and structural in nature were as follows:

1. In the recent semester, you have experienced doing peer assessments. Tell me your experience.

    a. What is your opinion about peer assessments?

    b. What do you think of peer assessments or giving marks to other group members?

    c. How did you feel when you had to give marks to other members of the group?

2. How did you award marks to your group members?

    a. How long did you take to decide on what scores to give to your group members?

    b. What were your considerations to decide on the score for each person?

Data Analysis

The focus group discussions were recorded and then transcribed. All transcripts were assigned pseudonyms and labeled from P01 to P43. Two researchers had coded the data independently (Given, 2008). After that similar ideas were categorized into themes and connections were built to link the themes with the Hofstede's cultural dimensions (Table 1) as the dimensions served as a "provisional perspective" (Lewis-Beck, Bryman, & Futing Liao,

2004) in the process of data analysis. All the themes and sub-themes that emerged from the data fit into Hofstede's cultural framework. No other theme that were distinctly different emerged. A discussion was held among the researchers to decide on the themes to achieve inter-coder reliability (Given, 2008). The raters agreed with about 80% of the themes. Then a few participants were invited back for a follow-up discussion by the researchers to verify the key emergent themes for the group.

Researchers had multiple tasks as they were also the instructors responsible for implementing, executing, and monitoring the peer-evaluation process throughout both semesters. This involvement enabled the researchers to conduct informal observations of the participants' behaviors and experiences in managing their team mates, making decisions, planning their activities, and solving problems within their natural setting. Such involvement enhanced the researchers' understanding of the participants' perspectives within the context. Coincidentally, all three researchers are like the participants, Malaysian ethnic Chinese. As with other qualitative studies,

the researchers also faced the challenge of the "*how*" in applying reflexivity (Finlay, 2017). The researchers self-reflected and discussed their pre-conceptions, opinions and observations during planning, data collection and data interpretation. This practice of introspection (Finlay, 2002) through self-dialogue and group discussions in each stage made the researchers more self-aware of their own biases and pre-conceptions toward the students' perspectives. The researchers acknowledged the need to focus on the "new object rather than one's interpretation" (Smith et al., 2009, p. 25).

RESULTS

Dimension 1: High Power Distance

Theme 1: Teachers have more Authority over Peers.

Sub-theme 1.1: Teachers are the authorities who are more trustworthy and qualified in awarding scores than peers. Teachers were viewed to be of a higher level of authority compared to peers. Their position of authority is viewed as a more trustworthy and qualified. Given the high power distance,

Table 1
Summary of the research findings: Cultural dimensions, sub-themes and examples

Cultural Dimensions	Themes and Sub-Themes	Quotes and Examples
Dimension 1: High power distance	**Theme 1: Teachers have more authority over peers**	
	• **Sub-theme 1.1:** Teachers are the authorities who are perceived to be more trustworthy and qualified in awarding scores than peers	"*I think lecturers would also be more objective in giving scores because the factors of friendship would not influence the scores awarded. Therefore, the peer assessment scores and lecturer's scores would not be the same.*" (P10)

Table 1 *(continue)*

Cultural Dimensions	Themes and Sub-Themes	Quotes and Examples
Dimension 2: Collectivist	**Theme 2: Common good and popular students**	
	• **Sub-theme 2.1:** Increased motivation and sense of responsibility towards the common good	*"I can see that some members care more about the event. As a whole this is a process, learning process and learning journey. This is because it was actually two semesters, quite long. So, I have learnt how to manage an event. This learning journey and process of learning is very important, can learn quite a lot of things. The peer assessment not so important… we have learnt what we need to learn. How many scores your peers give you is not so important. Not everyone was keen to assess the performance of others. But on the other hand, we cannot remove the peer assessment component. Since the learning process is long, may be peers are in the position to see how each of the member contributed to the success of the campaign." (P33)*
	• **Sub-theme 2.2**: Popular students who are recognized and respected by teachers and peers get higher scores	*"In my experience, those who are popular get higher marks. Maybe because the students who like them would give them higher marks. But those who are not in their group will not give them high marks…depending on how much you favor the person."* (P23)
Dimension 3: Feminist	**Theme 3: The peer assessment exercise involves emotions and relationships**	
	• **Sub-theme 3.1:** Peer assessment is an emotional process	*"If they give me high marks, I feel happy. If they give me low marks, I would also feel happy because they point out my mistakes."* (P02)
	• **Sub-theme 3.2:** Prioritizing relationships over performance	*"I think most Malaysians give marks based on their relationship with that person. Not many of them will actually give marks fairly. If their best friends do not perform well, they will not give them low marks. If they are their enemies, they won't give them a good mark."* (P22)
Dimension 4: High Uncertainty Avoidance	**Theme 4: Strategy to avoid uncertainties**	
	• **Sub-theme 4.1:** Awarding high scores	"*If I were unsure how to grade my friend, I will just give him or her benefit of the doubt and write down a high score. It is just safer to give higher scores to others.*" (P43)
Dimension 5: Long-term orientation	**Theme 5: Long-term benefits of peer assessment**	
	• **Sub-theme 5.1:** Peer feedback important for self-improvement	*"I accept the feedback given to me by my friends because I want to improve myself. I am also interested to know how my friends perceive me so that I can correct my weaknesses. Their feedback will help me become a better person.*" (P38)
Dimension 6: Restraint	**Theme 6: Withholding negative feedback**	
	• **Sub-theme 6.1:** Prioritizing face-saving	"*Even if our peers have weaknesses, I don't think that many people would give negative feedback. They would just keep the negative comments to themselves and only give the positive feedback. Very few people would say it."* (P32)

the credibility of teachers was perceived to be greater compared to that of their peers in conducting assessments. Although the teacher herself gave the students the authority to award scores, the teacher was still viewed to be in a higher position in the hierarchy.

> *"The lecturer or the tutors are more knowledgeable and have the authority. We are all students and we are of the same level, and we all know each other….so, I feel that it will be better if the lecturer did the scores."* (P24)

> *"Most of the students prefer the lecturer and tutor to do the assessment as they are scared their friends may take revenge if they are not happy." (P04)*

As teachers are held in high regard, higher compared to their peers, they are considered to be worthier of the students' trust. Peers are interpreted to be relatively less objective in providing scores as they may be influenced by their personal relationships, unpleasant experiences caused by personal differences or past conflicts. The participants trusted the teacher more than peers. This phenomenon is common in the Malaysian Chinese culture where teachers are viewed as people who educated, accomplished, cultured in the Malaysian society with a moderately high social status in society. This finding is consistent with Hofstede, Hofstede and Minkov (2010) where cultures in Asian countries have a

higher hierarchical distance compared to those in Germanic and English-speaking Western countries that have a shorter distance. It also explains the students' lack of confidence and preference to have their instructor take charge (Cronje, 2011).

Dimension 2: Collectivist

Theme 2: Common Good and Popular Students.

Sub-theme 2.1: Increased motivation and sense of responsibility towards the common good. The participants perceived that "everyone worked harder" (P03) and "group members really put in effort to complete the project in order not to disappoint their friends" (P21). Group members were reported to be motivated to put in more effort and take more initiatives to contribute positively towards the group project when peer assessment was implemented.

> *"This is a good system because there are too many people for the teacher to supervise. So, it is fairer if we monitor each other. Peer assessment will also motivate us to perform better and avoid sleeping members in the group." (P12)*

> *"I feel that I am appreciated as a member to evaluate my peers. I feel that it is a fair way to evaluate group members because they would know what the other members have contributed." (P14)*

The participants' interpretations of their experiences reflected a deep concern

for common good. Members in collectivist cultures display loyalty to one another (Hofstede, 1980b) and take responsibility for other group members (Gudykunst et al., 1996). P14 appreciates her role as an evaluator not only provided them with the responsibility of observing and assessing their peers, but they also showed a heightened sense of self-awareness in their own behavior and contributions toward the group project. The participants could identify with the common good. Behaviors that bring benefit beyond the self reflects a person's open-heartedness and selflessness in the Chinese culture in bringing good to others beyond the self. Furthermore, such behaviors are also respectable.

Sub-theme 2.2: Popular students who are recognized and respected by teachers and peers get higher scores. Popular students are perceived to be recognized and respected by their peers and teachers. Participants perceive that popularity would mean a greater likelihood to gain higher scores from peers. Having a relatively higher status in the social hierarchy among their peers, popular students in the peer groups were perceived to be more likable, credible, capable and respected, thereby awarded popularity scores.

> *"The popular students will definitely get higher marks because they are more socially adapted and they are more favored by others based on their characteristics and energy such as enthusiasm. They know how to impress people by using flowery words."* (P11)

> *"For the students who know the lecturer personally, the lecturer can understand them better and would give them higher scores. The lecturer only looks at our work on the surface and do not know what others have done."* (P23)

Popular students have high social acceptance and are subjects of envy among their peers. The participants' interpretations of the culture reflected some degree of unfairness and difficulties if they have opinions that are different from their teacher and most of their peers pertaining to popular students. Students who have closer relationships with teachers are also popular among their peers tend to receive higher scores from their peers although the teacher was not involved in giving the scores in the peer assessment exercise. Thus, this collectivist behavior reflects the culture of the community whereby popular students are commonly respected and regarded by the group.

Dimension 3: Feminist

Theme 3: The Peer Assessment Exercise Involves Emotions and Relationships.

Sub-theme 3.1: Peer assessment is an emotional process. Participants faced internal conflict when they awarded scores to their peers. They displayed a greater concern for their peers' feelings than the objectivity of their scores. The participants attached emotions to the process of peer assessment. Furthermore, the participants' feedback on their peer assessment scores displayed feminist values putting their

peers' feedback and judgments above their own. They also displayed guilt if they did not reciprocate the high scores given by their peers.

> *"If I get high marks I would be motivated. If I get low marks I will reflect on my commitment and the efforts that I put into the project."* (P10)

> *"I would feel bad and embarrassed if I award someone with a low score, and that person gives me a high score."* (P27)

Sub-theme 3.2: Prioritizing relationships over performance. Students were more concerned about their relationship over performance and overall results of the project. They perceived themselves to be responsible for their peers' scores.

> "*We sometimes give friendly marks to our friends. Even though we know that this person has not contributed as much as the other members did, I would feel bad if because of the score I gave, his or her final grade would be affected."* (P10)

Members in the group chose to avoid potential conflicts if they were to explicitly voice or note down their negative feedback. This behavior is in line with their priority to preserve the friendship among peers that would be beneficial in the long-term. However, if their criticisms did not negatively affect their friendship, they would not mind expressing their comments for the benefit of self-improvement in the

future. Peers also tried to neutralize and tolerate uncooperative behaviors. It is a respectful behavior in the culture to be able to tolerate others and avoid conflicts. Such biases in peer assessment were known, expected, and accepted practices. The participant said,

> *"We must also understand what they are going through and why they are not performing when we give marks. If they do not perform the task but shows a good and helpful attitude, I would give the person high marks. We have to look at this holistically. We have to use our judgment. I would rather not discuss this issue."* (P08)

In prioritizing the relationship over performance, criticisms were held back as saving face was a concern. P32 was aware of the common values among the peers in prioritizing relationships by withholding negative feedback. P08 was even reluctant to discuss it in the open as the issues could bring about discomfort among peers in the group. If giving a negative feedback brought embarrassment to the peer thereby risking the damage of their relationship, the participants felt more comfortable leaving it unsaid although this could affect the group's performance.

Dimension 4: High Uncertainty Avoidance

Theme 4: Strategy to Avoiding Uncertainties.

Sub-theme 4.1: Awarding high scores In avoiding uncertainties, two participants said

that they would award high scores to their peers. One participant, P43, said she would award high scores in a situation when she is unsure how to evaluate her peer (see Table 1). P43's remedy to the avoid uncertainties is awarding high scores to her peers, to be on the safe side. Her reaction reflects her fears for potentially wrongly penalizing her peer if she had awarded a low score. Meanwhile, P30 would do the same when her peers do not perform up to par but she was uncertain of the cause. She said,

> "*Some of my friends do not have a good proficiency in English. So, when they produce the work the result is below average. But this is not their fault. We cannot give them a low score for quality of work just because their English is bad because they do put in the effort. So, I still give them a high mark. It would be unfair to follow the rubrics strictly.*" (P30)

In an empathetic tone, P30 expressed her consideration toward the challenges that her peers may face when they worked on the project, such as language barriers. Such action reflects her generosity and kindness as she shows consideration and empathy toward her peers. However, as examination results and grades are perceived to be important indicators of a person's success the Malaysian Chinese culture, so awarding high marks to avoid uncertainties could put the integrity of the scores in question.

Dimension 5: Long-term Orientation

Theme 5: Long-term Benefits of Peer Assessment.

Sub-theme 5.1: Peer feedback important for self-improvement. Participants also valued feedback by their peers. Feedback from peers were said to be useful in helping the students achieve their long-term goal of self-improvement. The feedback from their peers would help them understand themselves better – namely their strengths and weaknesses, and work toward self-improvement.

> "*When I graduate, I will become a better person if I take the feedback from my group mates to perform better. I received some comments from my friends about my attitude, my work and my punctuality. Some comments were good and some comments were not very good. But I accept them because I want to improve.*" (P13)

P13 described her position as being a team member who is open to any feedback from her peers. She interpreted such openness to be supportive and beneficial toward her ambition to becoming better person in the future. Thus, such openness to feedback is interpreted as being important, regardless of the quality or relevance of the feedback, as they contribute toward her achievement of her long-term goals. Her narration of her experience in receiving feedback in the peer evaluation process provided proof of her openness. Feedback was also a form of check and balance for group members as they would then know

if their performance or contributions were "up to par" (P10). Participants were grateful for the feedback from their peers that could contribute to their self-improvement in the long term. These qualities focusing on ambition, self-improvement, and forward planning among students indicate maturity and drive that are desirable qualities among young people in the Malaysian Chinese community.

Dimension 6: Restraint

Theme 6: Withholding Negative Feedback.

Sub-theme 6.1: Prioritizing face-saving. Participants are empathetic toward their peers as the receiver of their feedback and scores. Participants who give feedback to their peers do so with considerations of saving the face of their peers. One participant practiced restraint in expressing feedback to avoid an embarrassing the peers.

> *"If we want to give negative feedback to our friends, they would feel embarrassed, and then I would feel uncomfortable giving the feedback. It also depends on the situation, if the person is open-minded, of course I will tell him or her and I would feel comfortable. I am not judging him but I hope we can learn from each other."* (P10)

This participant perceived that criticisms could potentially spark off conflicts or ill feelings to the recipient. The participant put himself in the shoes of his peer as the recipient of negative feedback. It is thus perceived that limiting the communication to positive matters would be face-saving. Avoiding the expression of negative feedback was also viewed as an act in support of a mutually cordial relationship with the peer. This behavior reflected tolerance toward others, a valued virtue in the Malaysian Chinese culture. However, the participant's decision to voice negative feedback depended on his own judgement of his peers' openness to criticisms. Therefore, he decides on the degree of restraint to apply when giving negative feedback. This also reflects the priority that the student put on the value of the face over his role and responsibilities as a peer evaluator.

DISCUSSION

The present study has achieved its objective in gaining a good understanding of Malaysian Chinese university students' perspectives on peer assessment in group projects. The study found that the Malaysian Chinese university students' perspectives in peer assessment fit into Hofstede's collectivist and feminist dimensions. Their perspectives also displayed high power distance, high uncertainty avoidance, and long-term orientation.

Malaysian Chinese undergraduates perceive assessments from an authority to be more trustworthy than peer assessments. The peer assessment system is a source of motivation for students to strive toward common good and the learning outcomes over their individual scores. The feminist culture also makes this process one that is related to emotions and relationships.

Positive emotions and relationships are desirable elements in the Malaysian Chinese community. Therefore, avoiding uncertainties, preferring consensus, and practicing conservatism (Hofstede, 1980a) in their dealings have resulted the participants awarding high scores to their peers as a strategy. The strategy, although not adhering closely to the marking rubrics, is used to avoid any uncertainties. The motivations of the Malaysian Chinese students to score high grades do not only stem from the desire to be "successful" individuals, but also in most cases, their need to safeguard the financial support from student loans or scholarships. Such pressure to score good grades is quite common among students in the private university. Thus, their remedy to avoid high uncertainties toward the unknown factors and some degree of distrust toward their peer evaluation structure was to award a higher score to their peers. Meta-analysis reviews by Falchikov and Goldfinch (2000) and Li et al. (2016) on findings in peer assessment reports showed that results from peer reviews had high validity. Meanwhile, Sahin (2008) established the validity and similarity of peer evaluation and teacher evaluation in producing the students' results in terms of grades and written or verbal feedback. The restraint displayed by participants by avoiding giving negative feedback to their peers, is a face-saving gesture. Practicing restraint to save another person's face is also important in the Chinese culture because losing face may mean that the person could be embarrassed or lose the respect

from others. Also, the participants showed appreciation for the feedback from their peers that could contribute to their long-term ambition toward self-development and self-improvement. Behaviors that contribute to long-term gains show ambition and maturity, and are encouraged and respectable in the Chinese culture.

CONCLUSION

Results from this study contribute to current debate on using peer assessment as a formal method of assessment by filling in the knowledge gap. The findings highlighted the importance for teachers to be culturally sensitive and responsive to students as these considerations could affect the students' success in university (Collins, 1999; Kainzbauer & Hunt, 2014). A practical implication of these findings is to enable teachers to apply evidence-based approaches in the planning and management of their assessments among Malaysian Chinese students in institutions of higher learning. Although findings from this study were not intended for generalization, they provided a helpful insight in understanding Malaysian Chinese university students' perspectives on peer assessment. Therefore, the findings only present the dimensions and sub-themes that emerged from the inquiry to examine the undergraduates' views on their recent experience in conducting peer assessments. Further research in examining Malaysian Chinese university students' attitudes and motivations using qualitative inquiries would contribute to existing literature. Future research may

also investigate the cultural perspectives among Malaysian Chinese teachers who implement peer assessments in their courses as these too may affect the students' learning experience in the university.

REFERENCES

Baker, D. F. (2008). Peer assessment in small groups: A comparison of methods. *Journal of Management Education, 32*(2), 183–209.

Baptista, G., & Oliveira, T. (2015). Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators. *Computers in Human Behavior, 50*, 418–430.

Bhimani, A., Gosselin, M., & Ncube, M. (2005). Strategy and activity based costing: A cross national study of process and outcome contingencies. *International Journal of Accounting, Auditing and Performance Evaluation, 2*, 187–205.

Bonham, L. A., Cifuentes, L., & Murphy, K. L. (1995). Constructing cultures in distance education. Retrieved on September 19, 2017, from http://it.coe.uga.edu/itforum/paper4/paper4.htm.

Bradbury-Jones, C., Sambrook, S., & Irvine, F. (2009). The phenomenological focus group: An oxymoron? *Journal of Advanced Nursing, 65*, 663–671.

Bryant, D., & Carless, D. (2010). Peer assessment in a test-dominated setting: Empowering, boring or facilitating examination preparation? *Education Research Policy Practice, 9*, 3–15.

Carson, D., Gilmore, A., Perry, C., & Gronhaug, K. (2001). *Qualitative marketing research.* London, UK: Sage.

Chen, Y. C., & Tsai, C. C. (2009). An educational research course facilitated by online peer assessment. *Innovations in Education and Teaching International, 46*(1), 105–117.

Chew, E., Snee, H., & Price, T. (2016). Enhancing international postgraduates' learning experience with online peer assessment and feedback innovation. *Innovations in Education and Teaching International, 53*(3), 247–259.

Collins, B. (1999). Designing for differences: Cultural issues in the design of WWW-based course-support sites. *British Journal of Educational Technology, 30*(3), 201–215.

Cronje, J. C. (2011). Using Hofstede's cultural dimensions to interpret cross-cultural blended teaching and learning. *Computers & Education, 56*, 596–603.

Department of Statistics, Malaysia. (2017). *Population & demography.* Retrieved on September 14, 2017, from http://www.dosm.gov.my/

Edgerton, E., & McKechnie, J. (2002). Students' views of group-based work and the issue of peer assessment. *Psychology Learning & Teaching, 2*, 76–81.

Falchikov, N., & Goldfinch, J. (2000). Student peer assessment in higher education: A meta-analysis comparing peer and teacher marks. *Review of Educational Research, 70*, 287–322.

Fellenz, M. R. (2006). Toward fairness in assessing student groupwork: A protocol for peer evaluation of individual contributions. *Journal of Management Education, 30*(4), 570–590.

Finlay, L. (2002). Negotiating the swamp: The opportunity and challenge of reflexivity in research practice. *Qualitative Research, 2*(2), 209–230.

Finlay, L. (2017). Championing "Reflexivities". *Qualitative Psychology, 4*(2), 120–125.

Friedman, B. A., Cox, P. L., & Maher, L. E. (2007). An expectancy theory motivation approach to peer

assessment. *Journal of Management Education, 32*(5), 580–612.

Given, L. M. (2008). *The SAGE encyclopedia of qualitative research methods. Retrieved October 20, 2016, from http://methods.sagepub.com/ reference/sage-encyc-qualitative-research-methods*

Greenan, K., Humphreys, P., & McIlveen, H. (1997). Developing transferable personal skills: Part of the graduate toolkit. *Education & Training, 39*(2), 71–78.

Gudykunst, W.B., Matsumoto, Y., Ting-Toomey, S., Nishida, T., Kim, K., & Heyman, S.A.M. (1996). The influence of cultural individualism–collectivism, self construals, and individual values on communication styles across cultures. *Human Communication Research, 22*(4), 510–543.

Haaga, D. A. (1993). Peer review of term papers in graduate psychology courses. *Teaching of Psychology, 20*, 28–32.

Hofstede, G. (1980a). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.

Hofstede, G. (1980b). Motivation, leadership, and organization: Do American theories apply abroad? *Organizational Dynamics, 9*(1), 42–63.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage.

Hofstede, G., Hofstede, J., & Minkov, M. (2010). *Culture and organizations: Software of the mind* (3rd ed.). New York, NY: McGraw Hill.

Hofstede, G., & Minkov, M. (2010). Long- versus short-term orientation: New perspectives. *Asia Pacific Business Review, 16*(4), 493–504.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds.). (2004). *Culture, leadership and organizations: The GLOBE study of 62 Societies*. Thousand Oaks, CA: Sage Publications.

Joy, S., & Kolb, D.A. (2009). Are there cultural differences in learning style? *International Journal of Intercultural Relations, 33*(1), 69–85.

Kainzbauer, A., & Hunt, B. (2014). Meeting the challenges of teaching in a different cultural environment – evidence from graduate management schools in Thailand. *Asia Pacific Journal of Education, 36*, 56–68.

Kirkman, B. L., Lowe, K. B., & Gibson, C. B. (2006). A quarter century of Culture's consequences: A review of empirical research incorporating Hofstede's cultural values framework. *Journal of International Business Studies, 37*(3), 285–320.

Kotey, B. (2007). Teaching the attributes of venture teamwork in tertiary entrepreneurship programs. *Education & Training, 49*(8/9), 634–655.

Latukefu, L. (2010). Peer assessment in tertiary level singing: Changing and shaping culture through social interaction. *Research Studies in Music Education, 32*(1), 61–73.

Lewis-Beck, M. S., Bryman, A., & Futing Liao, T. (2004). *The SAGE encyclopedia of social science research methods*. Retrieved on September 16, 2017, from http://methods.sagepub.com/ reference/the-sage-encyclopedia-of-social-science-research-methods

Li, H, Xiong, Y., Zang, X., Kornhanber, M. L, Lyu, Y., Chung, K. S., & Suen, H. K. (2016). Peer assessment in the digital age: A meta-analysis comparing peer and teacher rating. *Assessment and Evaluation in Higher Education, 41*(2), 245–264.

Lindblom-ylänne, S., Pihlajamäki, H., & Kotkas, T. (2006). Self-, peer- and teacher-assessment of student essays. *Active Learning in Higher Education, 7*(1), 51–62.

Llado, A. P., Soley, L. F., Sansbello, R. M. F., Pujolras, G. A., Planella, J. P., Roura-Pascual, N., Martínez, J. J. S., & Moreno, L. M. (2014). Student perceptions of peer assessment: An interdisciplinary study. *Assessment & Evaluation in Higher Education, 39*(5), 592–610.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253.

May, G. L. (2008). The effect of rater training on reducing social style bias in peer evaluation. *Business Communication Quarterly, 71*(3), 297–313.

Mazanec, J. A., Crotts, J. C., Gursoy, D., & Lu, L. (2015). Homogeneity versus heterogeneity of cultural values: An item-response theoretical approach applying Hofstede's cultural dimensions in a single nation. *Tourism Management*, *48*, 299–304.

McLeay, F., & Wesson, D. (2014). Chinese versus UK marketing students' perceptions of peer feedback and peer assessment. *International Journal of Management Education, 12*, 142–150.

McSweeney, B. (2002). Hofstede's model of national cultural differences and the consequences: a triumph of faith-a failure of analysis. *Human Relations, 55*, 89–118.

Montalvão, D., & Baker, T. (2015). Correlating peer and tutor assessment on a low-stakes engineering assignment. *International Journal of Mechanical Engineering Education, 43*(3), 168–179.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Pereira, J., Echeazarra, L., Sanz-Santamaría, S., & Gutiérrez, J. (2014). Student-generated online videos to develop cross-curricular and curricular competencies in nursing studies. *Computers in Human Behavior*, *31*, 580–590.

Reinholz, D. (2016). The assessment cycle: A model for learning through peer assessment. *Assessment and Evaluation in Higher Education*, *41*(2), 301–305.

Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach*. New York, NY: The Guildford Press.

Sahin, S. (2008). An application of peer assessment in higher education. *The Turkish Online Journal of Educational Technology, 7*(2), 5–10.

Schein, E. H. (1985). Organizational culture and leadership: A dynamic view. *Organization Studies, 7*, 199–201.

Signorini, P., Wiesemes, R., & Murphy, R. (2009). Developing alternative frameworks for exploring intercultural learning: a critique of Hofstede's cultural difference model. *Teaching in Higher Education, 14*(3), 253–264.

Singh, J. (1990). Managerial culture and work-related values in India. *Organization Studies, 11*, 75–101.

Smith, J. A., Larkin, M., & Flowers, P. (2009). *Interpretive phenomenological analysis: Theory, method and research.* Los Angeles, CA: Sage.

Smith, R. A. (1990). Are peer ratings of student debates valid? *Teaching of Psychology, 17*, 188–189.

Soares, A. M. Farhangmehr, M., & Shoham, A. (2007). Hofstede's dimensions of culture in international marketing studies. *Journal of Business Research, 60*(3)*,* 277–284.

Speer, S. (2010). Peer evaluation and its blurred

boundaries: Results from a meta-evaluation in initial vocational education and training. *Evaluation, 16*(4), 413–430.

Sung, Y., Lin, C., Lee, C., & Chang, K. (2003). Evaluating proposals for experiments: An application of web-based self-assessment and peer-assessment. *Teaching of Psychology, 30*, 331–334.

Tinto, V. (1998). Colleges as communities: Taking research on student persistence seriously. *The Review of Higher Education, 21*(2), 167–177.

Topping, K. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research, 68*(3), 249–276.

Topping, K. (2009). Peer assessment. *Theory into Practice, 48*(1), 20–27.

Warwick, P. (2007). Well-meant but misguided: A case study of an English for academic purposes programme developed to support international learners. *International Journal of Management Education, 6*(2), 1–7.

Williamson, D. (2001). Forward from a critique of Hofstede's model of national culture. *Human Relations, 55*(11), 1373–1395.

Zundert, M. J., Dominique M. A., Sluijsmans, D. M. A., Könings, K. D., & Merriënboer, J. J. G. (2012). The differential effects of task complexity on doman-specific and peer assessment skills. *Educational Psychology, 32*(1), 127–145.

PERTANIKA JOURNALS

Mobile Learning Readiness among English Language Learners in a Public University in Malaysia

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ABSTRACT

A critical factor for English language researchers and practitioners to consider when designing and implementing mobile-based learning solutions is students' readiness to embrace the educational use of mobile technology. Despite the increasing popularity of mobile technology in Malaysia, little is known about whether students are ready if such technology is to be integrated in their lessons. This paper aims to investigate mobile learning readiness among English language learners in a Malaysian university. The quantitative survey approach was used in this study, and Parasuraman's Technology Readiness Index (TRI) was adapted for use. Questionnaires were distributed to 68 undergraduates from various study fields who were undertaking English language courses in the university. The study reveals that the respondents are moderately ready for mobile technology. Although they are highly optimistic, their perception pertaining to innovativeness towards the technology is relatively moderate. They also have moderate discomfort and feeling of insecurity in using mobile technology. There are significant positive correlations between positive constructs (optimism and innovativeness) and overall TRI. However, there are no significant correlations between negative constructs (discomfort and insecurity) and overall TRI. This study highlights the importance for English language learning providers to consider students' beliefs and predispositions in adopting a technological learning approach in their teaching. A deeper understanding of students' readiness for mobile learning may facilitate efforts to enhance the teaching and learning of English language through the use of mobile technology.

Keywords: Mobile learning, English language, higher education, Malaysia, technology readiness, Technology Readiness Index, teaching and learning

INTRODUCTION

Mobile learning refers to the mobile use of wireless digital devices in education (Traxler, 2007). Examples of devices commonly used in mobile learning include personal electronic devices such as palmtops and smartphones (Keegan, 2005). Through these devices information can be acquired and disseminated anywhere and at any time, allowing learning and teaching to occur at the users' convenience. Due to the mobility and portability of the devices used and their ability to fit easily in a pocket or purse, mobile learning is also popularly regarded as a form of pocket education.

Today, mobile learning has been implemented in educational institutions in many countries around the world, including Asian nations, be it developed countries like Bahrain, Japan and Saudi Arabia or developing ones like China, India and several Southeast Asian countries. In Bahrain, for instance, Mohammad and Anil Job (2013) showed that mobile learning is being used as a blended learning tool. In Saudi Arabia, King Saud University has implemented facilities to support mobile learning. According to Almutairy, Davies and Dimitriadi (2015), the university has launched a service that allows users to send text messages to the mobile phones of individuals or groups of students directly from their PCs. As for Southeast Asia, studies have indicated that mobile learning has been adopted to a varying extent across this region, and member countries are increasingly relying on information and communication technology (ICT), including mobile devices, in order to address various issues related to the development of the education field for the sustainability of their economic and social growth (Farley & Song, 2015; Hong & Songan, 2011).

In Malaysia, mobile learning is currently gaining momentum and being explored by many educators and researchers (Hussin et al., 2012). Although earlier studies claimed that mobile learning is still in its infancy in Malaysia (Ismail & Idrus, 2009; Ismail & Azizan, 2012), several scholars also agreed that there has been significant growth in the number of research focused on mobile learning in this country since the last decade (Masrom et al., 2016; Song et al., 2013). In fact, mobile technologies are seen as a great potential to address the growing need for educational access due to the benefits offered by the widespread ownership and usage of mobile devices in Malaysia (Arokiasamy, 2017). This is supported by the statistics given by the Malaysian Communications and Multimedia Commission (MCMC, 2017) showing that smartphones continue to be the most popular means for Internet accessibility among Malaysians, making the country a mobile-orientated society. These points further suggest the potential of mobile technologies as the future means for increasing educational opportunities among communities at all levels in this nation.

To date, many studies have been carried out in Malaysia on the use of mobile learning. Some look at the feasibility of mobile learning as a learning tool (Hashim, Wan Ahmad, & Ahmad, 2010; Siraj, 2004; Shuib, Abdullah, Ismail, &

Zahari, 2012), whereas a few others look at the readiness of mobile learning among students (Andaleeb et al., 2010; Ismail et al., 2016; Rashidah et al, 2011). In terms of language learning, Mohamad and Muniandy (2014) report an increasing trend in the research area of mobile-assisted language learning in Malaysia, specifically in terms of communication skills. In a recent study, Darmi and Albion (2017) explored the use of basic mobile phone functions for an oral communication skills course in a Malaysian higher education institution. Other studies explored the development of mobile-based applications and a conceptual framework for language teaching-learning purposes (Leow, Wan Yahaya, & Samsudin, 2014; Shuib et al., 2015).

However, despite the significant level of interest among educators and researchers, thus far there has not been much documented evidence that indicates the actual use of mobile learning from the perspective of Malaysian higher education. Specifically, only a few studies on mobile-assisted language learning has been done so far involving students in Malaysian universities and little is known about their readiness to embrace such approach in learning the English language. As noted by Mohamad and Muniandy, most existing studies on mobile-assisted language learning in Malaysia are skewed to the similar context of school education and thus, there is a gap in the possibility of embracing mobile-assisted language learning in other areas. Despite various perceived advantages, it is also unclear the extent to which university English language learners are ready for this method of learning. Furthermore, not many mobile learning studies have been done involving students and teachers of non-science /non-technical courses including the English language (Shuib et al., 2015).

Language learning involves the development of a language system and language use in which learners and teachers are active participants (Kukulska-Hulme, Norris, & Donohue, 2015). Mobile technologies enable active participation in ways that were previously impossible in language learning. According to Kukulska-Hulme, Norris and Donohue (2015), students now "carry with them powerful devices with which they can:

- Create and share multimodal texts
- Communicate spontaneously with people anywhere in the world
- Capture language use outside the classroom
- Analyse their own language production and learning needs
- Construct artefacts and share them with others
- Provide evidence of progress gathered across a range of setting, in a variety of media"

(p.7)

Clearly, using the various applications available in smartphones, English teachers can make their lessons more authentic, interactive and interesting. However, there are many factors that need to be considered before teachers and learners can embark on mobile learning. Two major factors

identified by Kukulska-Hulme, Norris and Donohue (2015) are firstly, the availability of mobile devices among all learners and secondly, learners' willingness to use their personal mobile devices as part of language learning in and out of class. It is important that for mobile-assisted lessons to be effective, all learners have access to a smartphone. This is because even though they can share and work together, listening and viewing may sometimes require the use of one device per person. The second factor i.e. learners' willingness to use their personal mobile devices takes into consideration various elements including the cost for Internet use and data downloading, Wi-Fi connection and data storage.

Users' readiness for change involves their acceptance towards a new intervention and is an essential aspect when it comes to investigating whether such change is supported when it is being implemented (Abas et al., 2009). For Parasuraman (2000), there are four considerations for mobile technology readiness: optimism, innovativeness, discomfort and insecurity. According to Parasuraman, optimism relates to a positive view about technology and a belief that technology offers increased control, flexibility and efficiency in life. Innovativeness concerns users' tendency to try out new things. Discomfort consists of a perception of lack of control over technology and a feeling of being overwhelmed by the technology, while insecurity involves the distrust of technology for security and privacy reasons. Optimism and innovativeness are considered positive

drivers as they encourage users to use technology and hold positive attitudes towards technology. On the other hand, discomfort and insecurity are negative drivers as they inhibit users' adoption of technology.

The present study was motivated by these important considerations. It sought to find out the extent to which Malaysian university English language learners are ready for mobile-assisted learning and to identify the factors contributing to their readiness. The implication of learners' technology readiness towards the implementation of mobile-assisted language learning in Malaysian higher education institutions are further discussed based on the findings of this study.

METHODS

The study employed a quantitative method involving distribution of questionnaire to English language learners undertaking various undergraduate study programmes in a public university in Malaysia. Seventy sets of questionnaires were distributed based on convenience sampling technique with a 97.1% return rate. The total number of respondents who participated in the study was 68.

This questionnaire was adopted from the Technology Readiness Index (TRI) developed by Parasuraman (2000). It consisted of a 36-item scale involving four constructs: optimism (10 items), innovativeness (7 items), discomfort (10 items) and insecurity (9 items). Each item was measured using a 5-point Likert scale

(Strongly Disagree = 1 to Strongly Agree = 5). Despite being developed way back in the year 2000, this version of TRI has been the object of research by various scholars in a variety of contexts (Parasuraman & Colby, 2014).

The present study was motivated by these important considerations. It sought to find out the extent to which Malaysian university English language learners are ready for mobile-assisted learning. Specifically, the aims of the study are:

1. to determine the level of readiness of mobile learning among English language learners in a public university in Malaysia

2. to examine the factors that contribute to mobile learning readiness among English language learners in a public university in Malaysia.

In this study, the level of readiness is determined by the overall mean score for each construct as follows: (0-2.4 = low, 2.5-3.4 = moderate, 3.5-5 = high).

RESULTS

Demographic Profile

Table 1 displays the demographic profile of the respondents.

As indicated in Table 1, the majority were female (73.5%), 21-25 years old (51.5%), Malay (79.4%), Year 2 students (54.4%) and studying Arts (58.8%) subjects with a CGPA ranging from 2.50 to 2.99 (30.9%). In terms of mobile-phone ownership, the majority of the respondents

had at least one mobile phone (63.2%), while only 1.2% did not own one.

Table 1
Respondents' demographic profile

	Frequency	Percentage (%)
Gender		
Male	18	26.5
Female	50	73.5
Age		
20 years and below	32	47.1
21-25 years old	35	51.5
No answer	1	1.5
Ethnicity		
Malay	54	79.4
Chinese	11	16.2
Others	3	4.4
Year of Study		
Year 1	15	22.1
Year 2	37	54.4
Year 3	11	16.2
Year 4 and above	5	7.4
Study Programme		
Art	40	58.8
Science	25	36.8
No answer	3	4.4
Current CGPA		
2.00 to 2.49	2	2.9
2.50 to 2.99	21	30.9
3.00 to 3.49	20	29.4
3.50 to 4.00	5	7.4
No CGPA yet	19	27.9
No answer	1	1.5
Mobile Device Ownership		
I do not own any mobile device.	1	1.5
One mobile phone only	43	63.2
More than one mobile phone	24	35.3

Level of Mobile Technology Readiness

Table 2 displays the descriptive analysis of respondents' optimism towards mobile technology.

The table indicates that the level of optimism towards mobile technology among the respondents was considerably high. All the items for this factor received a mean score of 3.50 or above. Respondents generally agreed that they liked the idea of using mobile devices for the purpose of learning due to the flexibility of time and ability to tailor things to fit their own needs. They also agreed that mobile products and services were much more convenient to use and made their learning more efficient.

Table 2
Optimism towards mobile technology

#	Item (Overall mean = 3.78)	Mean	Std Dev.
1	Mobile technology gives people more control over their daily lives.	3.78	0.735
2	Products and services that use mobile technology are much more convenient to use.	3.90	0.694
3	You like the idea of using mobile devices for the purpose of learning because you are not limited to regular working hours.	3.97	0.753
4	You prefer to use the most advanced mobile learning technology available.	3.79	0.783
5	You like mobile devices that allow you to tailor things to fit your own needs.	3.91	0.685
6	Mobile technology makes you more efficient in your learning.	3.87	0.827
7	You find mobile technology to be mentally stimulating.	3.64	0.847
8	Mobile technology gives you more freedom of mobility.	3.72	0.813
9	Learning about mobile technology can be as rewarding as the technology itself.	3.66	0.745
10	You feel confident that mobile devices will follow through with what you instructed them to do.	3.50	0.838

Table 3 displays the descriptive analysis of respondents' perception pertaining to innovativeness towards mobile technology.

The table indicates that the level of innovativeness towards mobile learning among respondents was moderate.

Table 3
Innovativeness towards mobile technology

#	Item (Overall mean = 3.11)	Mean	Std Dev.
1	Other people come to you for advice on new mobile technologies.	3.47	0.938
2	It seems your friends are learning more about the newest mobile technologies than you are.	3.84	0.828
3	In general, you are among the first in your circle of friends to acquire new mobile technology when it appears.	2.79	1.114
4	You can usually figure out new high-tech mobile products and services without help from others.	3.19	1.149
5	You keep up with the latest mobile technological developments in your areas of interest.	3.24	0.994
6	You enjoy the challenge of figuring out high-tech mobile gadgets.	3.57	0.886
7	You find you have fewer problems than other people in making mobile technology work for you.	3.29	0.811

Nevertheless, they enjoyed the challenge of figuring out high-tech mobile gadgets (mean: 3.57).

Table 4 displays the descriptive analysis of respondents' discomfort towards mobile technology.

The table indicates that the level of respondents' discomfort was above moderate. The respondents mostly perceived that new mobile technology made it too easy for governments and organisations to spy on people (mean: 4.01), and they were worried about health and the safety risks linked to using mobile technology (mean: 3.74) and believed that there should be caution in replacing important people-tasks with mobile technology because new mobile technology can break down or get disconnected (mean: 3.74).

Table 4
Discomfort towards mobile technology

#	Item (Overall mean = 3.54)	Mean	Std Dev.
1	Technical support lines about mobile technology are not helpful because they don't explain things in terms you understand.	3.46	0.745
2	Sometimes, you think that mobile technology systems are not designed for use by ordinary people.	3.41	0.996
3	There is no such thing as a manual for a high-tech mobile product or service that's written in plain language.	3.44	0.780
4	When you get technical support from a provider of a high-tech mobile product or service, you sometimes feel as if you are being taken advantage of by someone who knows more than you do.	3.34	0.924
5	If you use a high-tech mobile product or service, you prefer to have the basic model over one with a lot of extra features.	3.31	0.868
6	It is embarrassing when you have trouble with a high-tech mobile gadget while people are watching.	3.43	0.967
7	There should be caution in replacing important people-tasks with mobile technology because new mobile technology can break down or get disconnected.	3.74	0.765
8	Many new mobile technologies have health or safety risks that are not discovered until after people have used them.	3.74	0.638
9	New mobile technology makes it too easy for governments and organisations to spy on people.	4.01	0.635
10	Mobile technology always seems to fail at the worst possible time.	3.56	0.678

Table 5 displays the descriptive analysis of the respondents' level of insecurity towards mobile technology.

Table 5 indicates that the level of insecurity towards mobile learning among respondents was above moderate. The respondents were generally worried that the information they send using mobile devices would be seen by other people (mean: 3.91). They also felt that all learning transactions via mobile devices should be confirmed later with something in writing and they also needed to check carefully that the mobile device was not making mistakes (mean: 3.70).

Table 5
Insecurity towards mobile technology

#	Item (Overall mean = 3.65)	Mean	Std Dev.
1	You do not consider it safe giving out a credit card number over a mobile device.	3.48	0.959
2	You do not consider it safe to do any kind of financial business via mobile devices.	3.69	0.846
3	You worry that information you send using mobile devices will be seen by other people.	3.91	0.733
4	You do not feel confident doing learning with a place that can only be reached via mobile devices.	3.58	0.742
5	All learning transactions you do via mobile devices should be confirmed later with something in writing.	3.70	0.759
6	Whenever something gets automated, you need to check carefully that the mobile device is not making mistakes.	3.70	0.798
7	Involvement of lecturers is very important when using a learning service via mobile devices.	3.57	0.783
8	You prefer to talk to a person rather than a mobile device.	3.69	1.003
9	If you provide information using a mobile device, you can never be sure if it really gets to the right place.	3.54	0.859

Contributing Factors

In order to determine the contributing factors that may influence mobile technology readiness among the respondents, the TRI components were correlated, as displayed in Figure 1 below.

Components	Optimism	Innovativeness	Discomfort	Insecurity	Overall TRI
Optimism	1				
Innovativeness	0.421**	1			
Discomfort	0.406**	0.412**	1		
Insecurity	0.291*	0.372**	0.355*	1	
Overall TRI	0.574**	0.564**	-0.152	-0.286	1

Figure 1. Correlations between TRI constructs and overall TRI

The figure shows that there were significant positive correlations between positive constructs (optimism and innovativeness) and overall TRI. On the other hand, there were no significant correlations between negative constructs (discomfort and insecurity) and overall TRI.

These results imply that respondents who were optimistic and innovative about mobile technology would most probably be

ready for the technology. On the other hand, respondents' discomfort and insecurity towards mobile technology did not seem to influence their overall readiness for the technology.

There were also significant positive correlations between both contributors or positive constructs and inhibitors or negative constructs. This suggests that respondents who were technology optimists and innovators also experience technology-related anxieties when it comes to mobile-related technology. In other words, although the respondents were considerably optimistic about mobile technology, they also felt quite insecure and uncomfortable about the technology for personal reasons.

DISCUSSION

In general, the study revealed that the respondents were moderately ready for mobile technology. Although they were highly optimistic about using mobile technology for learning, their perception pertaining to innovativeness towards the technology was relatively moderate. They also had moderate discomfort and feeling of insecurity in using mobile technology.

The respondents' optimism and moderate level of innovativeness were consistent with findings reported in several previous studies on mobile-learning readiness. For instance, Mahat et al. (2012) found that respondents in their study had a moderate level of confidence in using mobile technologies for educational purposes. A reasonable level of confidence is important for mobile learning to be implemented successfully. This is because effective learning can happen only when the learner decides to engage himself/herself actively and cognitively in learning activities (Hussin et al., 2012).

In terms of innovativeness, as with the present study, the study by Mahat et al. (2012) found that even though their respondents were willing to use mobile technology, they were reluctant to be the first one to try. Abu Al-Aish and Love (2013) found that students' personal innovativeness had a significant influence on their behavioural intention to use mobile learning. Teachers should then consider this factor when implementing mobile technology as lack of innovativeness may hold students back from effectively using the technology. In other words, while learners may have a positive perception of mobile learning, they may also be somewhat resistant towards it. This suggests the need for learners' support and assistance in order to assist them to adapt well to this new teaching and learning approach.

Regardless of the possible negative implications, the findings of the present study suggest that implementing mobile learning for English language lessons may be feasible. The findings indicated that mobile technology can form an integral element for English language teachers and learners, complementing face-to-face teaching. Hence, mobile technology can act as a supplementary tool for English language learning in today's 4.0 Industrial Revolution era, which emphasises this key aspect in promoting effective pedagogy.

The benefits of using mobile learning for English language teachers and learners are immense. Aamri and Suleiman (2011) demonstrated that mobile learning helped English language learners to improve their literacy and numeracy skills. Cavus and Ibrahim (2008) demonstrated that the use of mobile technology improved students' acquisition of new words. Kukulska-Hulme, Norris and Donohue (2015) listed a number of ways in which mobile pedagogy can enhance English language teaching. These include incorporating tasks relating to learners' communicative needs, exposing learners to language as a dynamic system, integrating the four skills and allowing learners choices in what and how to learn.

However, the findings also suggest that teachers should be cautious in implementing mobile technology. The data demonstrated that there may be concerns among English language learners pertaining to certain elements of security and comfort as the mean score of the two factors were very low (2.35 for insecurity and 2.45 for discomfort). It is therefore important that teachers consider such technology-related anxieties to ensure that the implementation of technology during language learning in the classroom is effective and the negative implications are minimized.

One major implication of the findings is that there should be a conducive eco-system for mobile learning in higher education institutions. English language teachers and higher education institution policy-makers should take heed of the policy guidelines for mobile learning recommended in UNESCO (2013). Some of the guidelines are training teachers for advance learning through mobile technologies, creating and optimizing educational content for use on mobile devices, expanding and improving connectivity options while ensuring equity and developing strategies to provide equal access for all.

Considering that mobile learning is still gaining momentum in this country, it may not be unreasonable to assume that many English language teachers in higher education institutions may still be unaccustomed to this mobile pedagogy. Thus, while students may be optimistic about the use of mobile devices for English language learning, their teachers may not have the appropriate skills to use the devices as teaching tools. Callum, Jeffrey and Kinshuk (2014), based on their study on teachers' adoption of mobile learning, notes that support is needed in terms of supporting general literacy. One possible solution is incorporating mobile technology in teacher education as shown by many scholars, since the use of mobile technology has the potential to significantly change practice in classrooms by reshaping learning. The incorporation of mobile technology in teacher education can play a major role in the integration of this technology in the classroom.

Connectivity is another important aspect in the mobile technology ecosystem. In order for any mobile technology to be used, Internet connectivity must be available to both students and lecturers all the time and at a reasonable speed. Connectivity

is a major challenge in Malaysia. A recent report by Akamai Technologies indicated that Malaysia ranks 73 in average Internet connection speed (The Star, 2015). It is therefore not surprising that discomfort received a relatively low mean score compared to innovativeness and optimism. The problem of connectivity may also be attributed to irregular power supply, a common problem in many rural areas in Malaysia. Irregular power supply leads to denial of service and can be a barrier to mobile learning. Learners' discomfort may significantly be reduced if the problem of connectivity can be addressed.

Learners' anxiety about security should also be addressed. According to Kambourakis (2013, p. 68), security concerns can "hamper the penetration of mobile technologies into the education realm, and hence prevent stakeholders from capitalizing on the benefits that these technologies bring along." Similar to the present study, a study by Shonola and Joy (2014) found that the majority of the respondents in their study agreed that privacy issues and exploitation of security breaches were concerns to them when it came to educational use of mobile devices. They cited several reasons for such concerns, including loss or theft of mobile devices, threat of virus and malware attacks and loss of private and confidential information. Their findings on security concerns were consistent with those of many previous studies. For example, Zamzuri et al. (2013) found that concerns about loss of confidential information contributed to students' rejection of online systems.

Obodoeze et al. (2013) found various forms of threats including virus/malware attack and hacking were the biggest security challenges faced by users of mobile devices in Nigeria.

CONCLUSION

The present study found that the English language learners who participated as respondents were moderately ready for mobile learning. In addition, they were considerably optimistic about mobile technology adoption. However, they also indicated a certain degree of technology-related anxieties that encompassed their discomfort and insecurity towards the phenomenon of mobile learning. Nevertheless these two factors did not significantly influence their mobile learning readiness. It may, therefore, be concluded that generally, Malaysian university English language students are moderately ready for mobile learning and that implementing mobile learning for English language lessons may be feasible.

Despite the positive findings, the issues of discomfort and insecurity must not be ignored. Various studies, as cited above, have demonstrated that these factors can hamper the implementation of mobile learning. A closer look at the findings reveals that concerns related to data security received the highest mean. Many mobile-phone applications for English language learning are readily available online. Teachers who wish to implement mobile learning must exercise caution in selecting the applications especially those that require

the users to share personal data. Issues such as connectivity, access, appropriateness of content and expertise among teachers to handle mobile learning will also need to be properly addressed before mobile learning can be a reality in Malaysian universities.

Teachers who choose to adopt mobile technology must also seek to create and optimise the content. According to UNESCO (2013), currently most educational content often lack relevance to local student populations. It is, therefore, imperative that interested teachers not just digitally transform their English language teaching content into mobile-orientated form, but also produce content that suits their learners' needs.

The present study considered mobile learning from English language students' perspectives. Future research work should focus on mobile learning based on other stakeholders in higher education institutions, including English language teachers and policy-makers. Even though learners can influence the way teaching and learning should take place, lecturers are the ones who have to carry out the implementation. Thus, it is imperative that future research examine lecturers' readiness in adopting mobile learning. Readiness among policy-makers is equally important. Technologically-related problems such as on-campus Internet connectivity can potentially be addressed if teachers gain the support of institutional policy-makers. Clear mobile learning policies should also be in place to ensure successful implementation. It would,

therefore, be worthwhile to carry out a study looking at the adoption of mobile learning from the policy-makers' perspective, too.

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REFERENCES

Aamri, A., & Suleiman, K. (2011). The use of mobile phones in learning English language by Sultan Qaboos University students: Practices, attitudes and challenges. *Canadian Journal on Scientific & Industrial Research, 2*(3), 143–152.

Abas, Z. W., Peng, C. L., & Mansor, N. (2009). *A study on learner readiness for mobile learning at Open University Malaysia.* In *IADIS International Conference Mobile Learning 2009.* Barcelona, Spain.

Abu-Al-Aish, A., & Love, S. (2013). Factors influencing students' acceptance of m-learning: An investigation in higher education. *The International Review of Research in Open and Distributed Learning*, *14*(5), 82-107.

Almutairy, S., Davies, T., & Dimitriadi, Y. (2015). Students' perception of their m-learning readiness. *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering, 9*(5), 1468–1471. Retrieved from http://scholar.waset.org/1999.10/10001323

Andaleeb, A. A., Idrus, M. R., Ismail, I., & Mokaram, A. K. (2010). Technology readiness index

(TRI) among USM distance education students according to age. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering, 4*(3), 229–232. Retrieved from http://waset.org/Publication/technology-readiness-index-tri-among-usm-distance-education-students-according-to-age/12771

Arokiasamy, A. R. A. (2017). A qualitative study on the impact of mobile technology among students in private higher education institutions (PHEIs) in Peninsular Malaysia. *Journal of Entrepreneurship and Business, 5*(2), 25–36.

Cavus, N., & Ibrahim, D. (2008). MOLT: A mobile learning tool that makes learning new technical English language words enjoyable. *International Journal of Interactive Mobile Technologies, 2*(4), 38–42.

Darmi, R., & Albion, P. (2017). Enhancing oral communication skills using mobile phones among undergraduate English language learners in Malaysia. In *Mobile Learning in Higher Education in the Asia-Pacific Region* (pp. 297–314). Singapore: Springer.

Farley, H., & Song, H. (2015). Mobile learning in Southeast Asia: Opportunities and challenges. In Y. Zhang (Ed), *Handbook of mobile teaching and learning* (pp. 403-419). Berlin, Germany: Springer-Verlag.

Hashim, A., Wan Ahmad, W., & Ahmad, R. Wan Ahmad (2010). Mobile learning implementation: students' perceptions in UTP. *World Academy of Science, Engineering and Technology, 4*, 2-25.

Hong, K. S., & Songan, P. (2011). ICT in the changing landscape of higher education in Southeast Asia. *Australasian Journal of Educational Technology*, *27*(8), 1276-1290

Hoong, T. K. (2015, December 18). Malaysia ranks 73 in average internet connection speeds. *The Star*. Retrieved from http://www.thestar.com.my/

Hussin, S., Manap, M. R., Amir, Z., & Krish, P. (2012). Mobile learning readiness among Malaysian students at higher learning institutes. *Asian Social Science, 8*(12), 276–283. Retrieved from http://dx.doi.org/10.5539/ass.v8n12p276

Ismail, I., & Azizan, S. N. (2012). Tailoring SMS-based m-learning system to Malaysian students' preferences. *WSEAS Transactions on Information Science & Applications, 9*(3), 80–92. Retrieved from http://www.wseas.org/multimedia/journals/information/2012/54-714.pdf

Ismail, I., Azizan, S. N., & Gunasegaran, T. (2016). Mobile learning in Malaysian universities: Are students ready? *International Journal of Interactive Mobile Technologies (iJIM)*, *10*(3), 17–23.

Ismail, I., & Idrus, R. M. (2009). Development of SMS mobile technology for m-learning for distance learners. *International Journal of Interactive Mobile Technologies, 3*(2), 55–57. Retrieved March 3, 2016, from http://dx.doi.org/10.3991/ijim.v3i2.724

Kambourakis, G. (2013). Security and privacy in m-learning and beyond: Challenges and state-of-the-art. *International Journal of u-and e-Service, Science and Technology, 6*(3), 67–84.

Keegan, D. (2005). *The incorporation of mobile learning into mainstream education and training*. Retrieved March 3, 2016, from http://www.mlearn.org.za/CD/papers/keegan1.pdf

Kraut, R. (2013). *UNESCO policy guidelines for mobile learning.* France: UNESCO.

Kukulska-Hulme, A., Norris, L., & Donohue, J. (2015). Mobile pedagogy for English language teaching: A guide for teachers. Retrieved March 3, 2016, from http://oro.open.ac.uk/43605/1/__userdata_documents3_lemn3_Desktop_E485%20Mobile%20pedagogy%20for%20ELT_FINAL_v2.pdf

Leow, C. K., Yahaya, W. A. J. W., & Samsudin, Z. (2014). Mobile-assisted second language learning: Developing a learner-centered framework. Paper presented at *International Conferences on Education Technologies (ICEduTech) and Sustainability, Technology and Education (STE) 2014*. Retrieved March 3, 2016 from https://www.learntechlib.org/p/158354/.

Mahat, J., Ayub, A. F. M., & Luan, S. (2012). An assessment of students' mobile self-efficacy, readiness and personal innovativeness towards mobile learning in higher education in Malaysia. *Procedia-Social and Behavioral Sciences*, *64*, 284–290. Retrieved March 3, 2016, from http://www.sciencedirect.com/science/article/pii/S1877042812050100

Malaysian Communications and Multimedia Commission (MCMC). (2017). *Internet users survey 2017: Statistical brief number twenty-one*. Retrieved March 3, 2016, from https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/MCMC-Internet-Users-Survey-2017.pdf

Masrom, M., Nadzari, A. S., Mahmood, N. H. N., Zakaria, W. N. W., & Ali, N. R. M. (2016). Mobile learning in Malaysia education institutions. *Issues in Information Systems*, *17*(4), 152–157.

Mohamad, M., & Muniandy, B. (2014). Mobile-assisted language learning in Malaysia: Where are we now? *Practice*, *47*, 55–62.

Mohammad, S., & Job, M. A. (2013). Adaption of M-Learning as a Tool in Blended Learning-A Case Study in AOU Bahrain. *International Journal of Science and Technology*, *3*(1), 14-20.

Obodoeze, F. C., Okoye, F. A., Mba, C. N., Asogwa, S. C., & Ozioko, F. E. (2013). A holistic mobile security framework for Nigeria. *International Journal of Innovative Technology an Exploring Engineering (IJITEE), 2*(3), 1–11.

Parasuraman, A. (2000). Technology readiness index (TRI) a multiple-item scale to measure readiness to embrace new technologies. *Journal of Service Research, 2*(4), 307–320. Retrieved March 3, 2016, from http://jsr.sagepub.com/content/2/4/307.full.pdf+html

Parasuraman, A, & Colby, C. (2014). An updated and streamlined technology readiness index: TRI 2.0. *Journal of Service Research,* 18(1), 1–16.

Siraj, S., & Saleh, M. (2004). Mobile learning in future curriculum. *Journal of Issues in Education, 27,* 128–142.

Shonola, S. A., & Joy, M. S. (2014, July). Mobile learning security issues from lecturers' perspectives (Nigerian universities case study). In *6th International Conference on Education and New Learning Technologies, 2014, July, 7-9, Barcelona, Spain* (Vol. 88, p. 7081).

Shuib, M., Abdullah, A., Azizan, S. N., & Gunasegaran, T. (2015). Designing an intelligent mobile learning tool for grammar learning (i-MoL). *iJIM, 9*(1), 41–46. Retrieved March 3, 2016, from http://dx.doi.org/10.3991/ijim.v9i1.4238

Shuib, M., Abdullah, A., Ismail, I., & Zahari, S. N. A. (2012). The feasibility of teaching English grammar via SMS. *SPECTRUM: NCUE Studies in Language, Literature, Translation,* (9), 133–144.

Song, H. S., Murphy, A., & Farley, H. (2013). Mobile devices for learning in Malaysia: Then and now. In *Electric Dreams: 30th Ascilite Conference* (pp. 830–834). Macquarie University, Australia.

Traxler, J. (2007). *International review of research in open and distance learning: Defining, discussing, and evaluating mobile learning: The moving finger writes and having writ...*, *8*(2), 1–12. Retrieved March 3, 2016, from http://www.irrodl.org/index.php/irrodl/article/view/346/882

Zamzuri, Z. F., Manaf, M., Yunus, Y., & Ahmad, A. (2013). Student perception on security requirement of e-learning services. *Procedia-Social and Behavioral Sciences, 90,* 923–930.

SOCIAL SCIENCES & HUMANITIES

PERTANIKA
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Apartheid Lingers: Sadism and Masochism in J. M. Coetzee's *Disgrace*

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ABSTRACT

Coetzee's *Disgrace* narrates the plights of individuals in their attempts to cope with the existential and social forces to maintain their precarious existence. Driven by the imperative to sustain their sanity and to achieve a sense of belonging, these individuals attempt to break free from their isolated existence and relate themselves to others. In fact, relating one to others and transcending one's separateness is one of human being's existential needs that has to be satisfied. This paper suggests that this existential need combines with social realities of South Africa and all the attempts to satisfy this existential need never result in a healthy attachment. This study argues that the individuals in post-apartheid world of *Disgrace*, in their attempts to transcend their isolation, reveal sadistic and masochistic aspects of themselves in their interpersonal relations. Their ontological insecurity, rooted in structural inadequacies of the society, compels them to establish unhealthy dependence on others. As they tie their survival to some unproductive ways of relatedness to others, they turn into what Coetzee calls deformed individuals. Therefore, sanity, which depends on productive satisfaction of existential needs, becomes absent, insanity and deformity prevails, and the prospect of a sane society recedes.

Keywords: Deformed individual, existential need, masochism, ontological insecurity, sadism, sanity

INTRODUCTION

While South Africa's first democratic election, following the collapse of apartheid regime, had been held in 1994 and the extensive report of the Truth and Reconciliation Commission had been presented to President Nelson Mandela only in 1998, the publication of Coetzee's *Disgrace* in 1999 created considerable

controversy due to the largely negative image of the new democratic society presented in the novel. Critics and commentators were divided as to how *realistically* the novel captured the hopes and worries of a people in a fledgling democracy. Concerned with the adverse implications of the novel for post-apartheid society, African National Congress regarded the novel as an example of racism in the media through perpetuating the stereotype of black men as natural rapists; a supposition that was based on depicting the rape of a white woman by black men in the novel. In other words, there was much debate about the nature of engagement of Coetzee's novel and its implications for the future of South African society after overthrowing the dehumanizing apartheid regime. Attridge (2000) summarized this controversy by raising the question that "does the largely negative picture [*Disgrace*] paints of relations between communities hinder the steps being made toward reconciliation?" (p. 99) and noted that the "the bleak image of the "new South Africa" in this work [is] hard to take."

Moreover, Attridge (2002) argued that

Coetzee was either praised (implicitly or explicitly) for unblinkingly depicting the lack of progress South Africa has made towards its declared goal of a non-racial, non-sexist democracy ... or condemned for painting a one-sidedly negative picture

of post-apartheid South Africa, representing blacks as rapists and thieves (p. 317).

In other words, the basic question is whether the novel depicts realities of democratic South Africa or whether it is a gloomy unrealistic picture, skeptically portraying sexual and racial transgression and violence.

Almost all the adverse reactions to the novel turn around the question of interpersonal–interracial relations in the time of truth and reconciliation. Indeed, *Disgrace* is Coetzee's vision of human condition in the new culture; a vision that posits an underlying violence at the heart of human relations in new South Africa, a violence that persists from apartheid era. This paper suggests that informed by Coetzee's deep understanding of human nature, human relations, and the interaction between the society and the individual, *Disgrace* portrays the social realities and existential complications involved in the transition from apartheid period to post-apartheid era, pointing toward the fact that the wounds of apartheid regime would not heal easily. In other words, the representation of "blacks as rapists and thieves" and the submission of the whites in *Disgrace* is not an *inherently* negative or racist image; it is rather an attack on the workings of apartheid structure that long manipulated and distorted the existential needs of South African people and gave rise to antagonistic

relationality, the result of which is the continuing interpersonal and interracial violence in democratic South Africa.

Jolly (2006) argued that ANC's focus on racism in the novel allowed it to gloss over the widespread rape and abuse of women in South Africa. She also criticized ANC's "desire" to encourage and promote literary works that would produce only a "positive image" of the society (p. 149). In fact, the novel should be viewed as a critique of the utopian belief that social apartheid could simply and smoothly be substituted by a *sane society* predicated on equality, genial coexistence of races, and humanistic values. The bleak image of the novel, then, was a gesture toward the fact that the end of apartheid does not "magically solve all social, political, and economic problems in South Africa" (Booker, p. 151). Rather, *Disgrace* is Coetzee's exploration of the continued presence of apartheid in the new culture since post-apartheid era, despite TRC's objectives, was not only the time of "political reform", but also "of revenge" (Barnard, p. 33).

Attwell (2015) similarly argued that post-apartheid is not a sudden and complete rupture with apartheid. He believed that in *Disgrace* Coetzee is concerned with the "social and psychic toxicity" that existed in the new South Africa (2015, p. 191). But, what is the nature of this "toxicity"? What consequences does it have? And what is the way out of this toxicity? Drawing upon Erich Fromm's social thought, this paper finds the answers in "pathological

attachments" or "deformed" relationality and absence of love which are the legacy of apartheid era.

Erich Fromm on Human's Needs and Sanity

Erich Fromm believes that humans' needs are of two kinds, *instinctual* and *existential* needs. Man's instinctual needs are bodily, physiological needs like hunger and thirst. Existential needs, on the other hand, are the needs that arise from the very specific conditions of human existence, such as the need to be related to others and the need to be effective. Indeed, human's life depends on satisfaction of both these needs. Fromm (2008), moreover, argued that while the satisfaction of instinctual needs, lower needs, was imperative and in fact ensures an individual's (physical) *survival*, the individual was threatened by *insanity* if his or her existential needs were left unsatisfied; that was, survival was tied to satisfaction of instinctual needs and sanity to satisfying existential needs. Maslow (1970), whose classification of humans' needs into "lower needs" and "higher needs" corresponded to Fromm's instinctual and existential needs, also believed that the satisfaction of growth or higher needs depended on and follows full gratification of safety needs and if humans' higher needs were not gratified, "neurosis" was inevitable.

Avoiding loneliness and relating oneself to others is one of the existential needs that needs to be satisfied. Fromm (2008) stated that "the necessity to unite with other

living beings, to be related to them, was an imperative needs on the fulfillment of which man's sanity depends. This need was behind all phenomena which constitute the whole gamut of intimate human relations" (p. 29). Fromm (1974) also stressed this need: "man, aware of his separateness, needed to find new ties with his fellowman; his very sanity depended on it. Without strong affective ties to the world, he would suffer from utter isolation and lostness" (p. 233). Becker, for whom "the most terrifying burden of the [human] creature was to be isolated" (171), similarly believed that isolation was not compatible with sanity.

Meanwhile, there is an important point about existential needs that differentiates them further from instinctual needs. While instinctual needs are satisfied in an almost straightforward way (thirst is gratified by drinking, hunger by eating), this is not true about existential needs. That is, they could be satisfied in a variety of ways, from some healthy, life-affirming ones to utterly destructive ones. Accordingly, in order to gratify the existential need of relating oneself to others, one may attach oneself to one's fellow beings in different ways: "man can relate himself to others in various ways: he can love or hate, he can compete or cooperate … but he must be related in some fashion." (Fromm, 2003, p. 58). Fromm (2001) emphasized this point as well (with a reference to the significance of satisfying this need): "the kind of relatedness to the world may be noble or trivial, but even being related to the basest kind of pattern is immensely preferable to being alone" (p.

15). The *noble*, productive way of relating oneself to the world is "love" where one does not lose his or her integrity in such a relation. The *trivial* way of satisfying the need to overcome one's separateness is "symbiotic attachment" (Fromm, 1956); that is, individuals seek "to escape … painful and practically deathlike aloneness through the forging of symbiotic bonds with others" (Chancer, 2000, p. 34). It is a state that Maslow calls "neurotic dependency." Symbiotic attachment is the polar opposite of Fromm's notion of love; it means to attach oneself to others in a way that one's self is dissolved. Obviously, for Fromm what distinguishes love from symbiotic attachment is the integrity of the individual; love, while an answer to a person's need, preserves his or her integrity, but symbiotically attached person loses it.

Two specific manifestations of symbiotic relationality were *sadistic* and *masochistic* orientations. Here, the individual's relations became relations of power in which he or she gave his or her self-up by fusing with and becoming submerged in another person. The individual related to others "by becoming part of them or by making them part of himself. In this symbiotic relationship he strived either to control others (sadism), or to be controlled by them (masochism)" (Fromm, 1973, p. 233). Sadism and masochism were, then, "strategies for relating to others" whereby the need for "social security" was satisfied "either through dominating others or being dominated by them" (Chancer, 1994, p. 15–16). The individual, in other words, either

"swallows" the other or let himself or herself be "swallowed" by the other (Fromm, 2003). Masochism, the desired to submit in order to overcome isolation and gain security was the passive form of symbiosis and sadism, striving to dominate others, was the active from of symbiotic orientation. The essence of symbiosis, then, was a willed dependence of self on the other because such a dependence yields a psychological relief from unbearable isolation; it was an escape "from existential anxieties and insecurities" (Chancer & Watkins, 2006, p. 118).

Therefore, in addition to his physiological needs whose satisfaction ensures his survival, man has to deal with another kind of needs, his existential needs. They have to be satisfied, otherwise man is threatened by insanity. These existential needs can be gratified in healthy or unhealthy ways. Prior among these needs is the need to overcome loneliness and relate oneself to others. Love is the healthy way of achieving this unity while symbiosis is the unproductive way. In order to overcome isolation, individuals are likely to unite themselves with others symbiotically; they may attempt to gain control over others, sadism, or they may be willing to submit themselves to the authority of others, masochism. Lurie, Lucy, and Petrus in *Disgrace*, driven by the existential need and faced by the social experiences of South Africa, reveal such sadistic and masochistic tendencies.

Disgrace is the scene of Frommian sadists and masochists. The characters driven by the need to relate themselves to others, get entangled in sadistic–masochistic relationships that strip them of their true individuality and humanity. The world of *Disgrace*, in other words, is the world of existential needs unproductively and symbiotically satisfied. This paper suggests that Fromm's ideas about people's sadism and masochism correspond to what Coetzee, in his Jerusalem Prize acceptance speech (1987), calls "deformed" and "stunted" individuals; individuals that was the products of "deformed and stunted relations between human beings" under apartheid (Coetzee, 1992, p. 98). Coetzee saw himself no exception to this deformity of character.

Accordingly, individuals with "stunted and deformed inner life" dominate *Disgrace*, experiencing the basic "unfreedom" of South African society. Although Coetzee's Jerusalem Prize speech was delivered about the life under apartheid regime and was written a few years before *Disgrace*, its insights still hold true in the post-apartheid world of *Disgrace*. In fact, it seems that Coetzee re-expresses the concerns of his speech in a fictional form. Watson (1996) who studied Coetzee's fiction in the context of colonialism argues that his earlier novels was basically concerned with "the human relationship" that was necessarily "one of power and powerlessness … a combination of sadism and masochism" (p. 14). This study then argues that the deformed characters, whose deformity and stunted*ness* was defined in Fromm's sense of sadistic and masochistic tendencies, was the products of apartheid social order and will not leave the South African scene rapidly

or as Durrant (2004) said "the deformed relations of apartheid … linger on in post-apartheid South Africa" (p. 123).

Drawing upon Raymond Williams's idea, it can be said that apartheid continues to have its *residual* presence in post-apartheid South Africa. Williams believed that in any historical process or culture, there was not only the *dominant* movement or tendency but also "the 'residual' and the 'emergent', "which in any real process, and at any moment in the process, are significant both in themselves and in what they reveal of the characteristics of the 'dominant'"" (p. 122). By *residual* Williams mean the elements persisting from the previous historical process or culture and by the *emergent* "new meanings and values, new practices, new relationships and kinds of relationship [that] was continually being created" (p. 123). Elleke Boehmer et al. (2009) reiterated this point by stated that Coetzee's "novels, both before and after the end of apartheid, demonstrated his continuing preoccupation with the recalcitrant presence or residue – particulars, bodies, realities – of South Africa" (p. 4). Therefore, in the *dominant* post-apartheid culture of *Disgrace*, apartheid still has its *residual* presence in the form of deformed, sadomasochistic characters.

Deformed Individuals in *Disgrace*

Coetzee's notion of deformed, stunted relation between individuals is evident in the relations between Lurie, Lucy, and Petrus. Such deformity and stuntedness of personality can be identified with the individuals'

sadism and masochism brought about by unproductive satisfaction of existential need of relatedness. Sadomasochistic relatedness is the manifestation of symbiotic attachment or what Coetzee, in his prize speech, calls "pathological attachments." Such unproductive ways of relating oneself to others require unhealthy dependence on others and loss of self and have a lot to do with dehumanizing structures of South African apartheid. In a racist society, in the words of Fanon, the individual was "deprived of the possibility of being a man" and robbed of "all worth, all individuality" and was told to be "a parasite on the earth" (p. 73). In other words, apartheid encourages dependency and a parasitic life in the form of symbiosis or pathological attachments.

As a white, male professor of the apartheid social order, David Lurie has long been used to satisfying his existential needs in sadistic ways. He is a sadistic character who extends his power over those around him and brings them under his control. That is why he is so disturbed when, early in the novel, Soraya refuses to act as his powerless, obedient prostitute any longer. Before leaving the university, his sadism was manifested mainly in his sexual relations, it was only after he was in the country with his daughter that his desired to have others under his control found other outlets and he experienced "crisis of authority" (Poyner, 2009). With Soraya gone, Lurie had to replace her with a new object for his sadistic strivings, that was, with his student Melanie Isaacs. His desired to have sadistic control over others was given a voice when in his

relation with Melanie he felt satisfied since "to the extent that they were together, if they were together, he was the one who leads, she the one who follows. Let him not forgot that" (Disgrace. P 27). Not surprisingly, by appealing to liberal views and calling himself the "servant of Eros", he denies that he took advantage of his position as a teacher to bring Melanie under his control; he believes that his experiences with others, especially with women, just "enriched" him (the idea of others existing only to "enrich" him sounds sadistic enough though).

After having to leave Cape Technical University as the result of the affair with Melanie, the twice-divorced Lurie is filled with the existential need to re-relate himself to others, to the world, that is, to establish some new sadistic ties. With his position of social dominance gone, Lurie, in need of new relations, turns to his daughter where he, as a father, may well be able to satiate his sadistic tendencies, since a father is *naturally* supposed to love and to have his daughter under his control. He became the "benevolent sadist": "the benevolent domination which often masquerades as "love" is an expression of sadism too" (Fromm, 2003, p. 108).

However, he found out that extending his power over his daughter was next to impossible. Lucy, who had long lived in the country, had gone through what Fromm (2001) called the "process of individuation," since she has already separated from her parents. A child grows up within a protective network of relations that the parents provided. These "primary ties"

gave the child the security and comfort it needed for physical, emotional, and mental development. Yet, this was a "pre-human" existence and the child needed to free itself from these primary ties in order to become an "individual." Lucy has already disentangled herself from the primary ties. However emerging from these primary ties was synonymous with losing the sense of security. Once one has left primary ties behind and had become an individual, he or she started to experience an acute sense of insecurity because those ties gave him or her the security. Fromm (2001) argued:

> *The other aspect of the process of individuation was growing aloneness. The primary ties offered security and basic unity with the world outside of oneself … This separation … created a feeling of powerlessness and anxiety* (p. 24).

This was a critical moment in one's development as an individual since this acute sense of aloneness creates unbearable anxiety that had to be dealt with. Falling back on primary ties could relieve the anxiety and bring back some sense of security. Lucy, then, in order to overcome the anxiety of isolation can return to primary ties. And this was what Lurie wants. He wished to drag Lucy back into this former helpless state of pre-human existence where he could exercise his control over her but Lucy resisted:

> *David, I can't run my life according to whether or not you like what I do.*

Not anymore. Well, contrary to what you think ... I am not minor. I have a life of my own ... I am the one who makes the decisions. (Disgrace, p. 198)

Therefore, in rejecting her father, Lucy in fact rejected getting re-entangled in "primary ties" that was a decisive step in completing the process of individuation, in becoming an individual. As an individual, she tried to keep her integrity in a father–daughter love relationship rather than losing it in a symbiotic relationship: "I cannot be a child forever. You cannot be a father forever. I know you mean well, but you are not the guide I need, not at this time" (Disgrace, p. 161). She told her father, the *benevolent sadist*. However, there is an important point here. Although Lucy refused to return to her helpless position, this was hardly a step toward genuine independence. By stating that she needed a "guide," Lucy revealed her willingness, her readiness to submit herself to an outside power.

Lucy's words were a hard blow to Lurie making him contemplate in a sadistic tone that as a child Lucy had been under his control and dependent on him but now she was "*Coming out of his shadow* (Disgrace 89; emphasis added)." Such a frustration of Lurie's sadistic tendencies awakened another existential need in him. He found Lucy impenetrable, unwilling to submit herself to his authority. Lurie was driven to Lucy by the existential need to relate himself to others after his university affair. Yet, Lucy's

rejection of his sadistic approaches pushes to foreground another existential need in Lurie. He became tormented with "the sense of being condemned to ineffectiveness- i.e., to complete vital impotence (of which sexual impotence is only a small part)- [which] is one of the most painful and almost intolerable experiences, and man will do almost anything to overcome it, from drug and work addiction to cruelty and murder" (Fromm, 1974, p. 237). From the beginning of the novel, Lurie had been troubled by this sense of approaching ineffectiveness even when he was still teaching at university. Old age and sexual impotence were two manifestations of ineffectiveness whose specters disturb Lurie. That was why when Lurie was still at university, he was worried that "he [Lurie] ought to give up, retire from the game. At what age, he wonders, did Origen castrate himself? … ageing is not a graceful business" (Coetzee, 2000, p. 9). Moreover, after his night with Melanie, uncertain about her motives for asking to stay at his house, and uncertain about what he himself wanted, Lurie examined his situation only to conclude that the affair was "a last leap of the flame of sense before it goes out" (Coetzee, 2000, p. 27).

The existential needed to be effective was the "needed to experience that there was someone who would react, someone on whom one could make a dent, some deed that would made an end of the monotony of daily experience." (Fromm, 1974, p. 251). In the past, Lurie did not sense *ineffectiveness* deeply. Since there were strong ties between

the need to be effective and the need to relate, his need to be effective was satisfied by his sadistic relations. However, when he was in the country and after Lucy rejected his sadistic advances, he started to feel *ineffectiveness* intensely. He found himself face with the bitter fact that he no longer had any power over his daughter. He started frequenting Animal Welfare League where he could regain some kind of sadistic control through his affair with Bev Shaw. Moreover, as "killing is one way of experiencing that one is and that one can produce an effect on another being" (Fromm, 1974, p. 251), he also finds killing dogs satisfying. He thinks "Why has he taken on this job? To lighten the burden on Bev Shaw? … For the sake of the dogs? … [No] For himself, then" (Disgrace, p. 146).

Lurie's turning to dogs has been discussed by different critics. The underlying debate is that if this turn to animals is an indication of a change in Lurie's character, of a moral growth, of an expansion of sympathies. Some critics believed that a positive change happened in Lurie and he improves morally: Head (2009) talked about Lurie's "partial moral growth"; Herron (2005) argued that through the novel we witness a "transmutation" in Lurie which was the result of "reciprocity and exchange with animals", in other words, "in being close to animals, in looking after them (even when they are dead), in learning from them, and in dwelling amongst them, David's capacity for sympathy was broadened to a remarkable degree" (p. 480); and Poyner

(2009) believed that Lurie, after his affair with Melanie and had to leave university, went through "some kind of reinvention" and argued that through his dealings with dogs, Lurie "struggles for atonement." Poyner, moreover, argued that Lucy's rape was "an event which forces Lurie to reassess his own relationship with women" (p. 152). One may have to pause here and ask in what terms Lurie reassessed his relation with women. Did the same man not get involved in an adulterous affair with Bev Shaw soon?

On the other hand, some critics argue that Lurie did not grow morally. Patrick Hayes (2010) argued that Lurie did not change in the story and believed that "it is a mistake to look to David for any supposedly redeeming change of heart… he was not a character who develops, but one who was wrongheadedly entrenched in a certain discursive construction"(p. 218). Attridge (2000) did not believe in redemptive power of Lurie's dog affair either and argues that it was a "misreading" to think that "he [Lurie] is taking on an existence of suffering and service as expiation for his sin" (p. 116). Attrridge (2002) also argued that Lurie's devotion to Bev Shaw's dogs "obeys no logic and offers no comfort." Analyzing Lurie's motivations for entangling himself with the dogs and Animal Welfare League, Attridge (2000) concluded that Lurie's involvement with dogs was "ultimately grounded in a profound personal need." This "profound personal need" was the existential need to be effective, "the need to reassure himself that he was *by being able to effect*"

(Fromm, 1974, p. 236; italics in original). Being a sadistic character type and rejected by others, particularly by Lucy, Lurie seeked to satisfy this need by killing and beating dogs and also in his affair with Bev Shaw; it was a lust for his lost domination.

At the same time, although Lucy refused to become the object of his father's sadistic approaches, she was troubled by a deep sense of insecurity, by the need to be related. She had to satisfy this need or she would be facing insanity. Yet, she cannot relate herself in a productive way and reveals her masochistic side. This was because she was very well aware of post-apartheid conditions where a new order was in place.

In a conversation with Lurie, Lucy, while explaining her situation, revealed her true concerns by saying that "objectively I am a woman alone… To whom can I turn for protection, for patronage? … there is only Petrus left…he is big enough for someone small like me" (Disgrace, p. 204). Lucy was experiencing what Laing refered to as "ontological insecurity". In the state of ontological insecurity "relatedness to other persons [has] a radically different significance and function… In the individual whose own being is secure in this primary experiential sense, relatedness with others is potentially gratifying; whereas the ontologically insecure person is preoccupied with preserving rather than gratifying himself" (p. 42). This was particularly true about Lucy. She was "a woman alone" who had to overcome her existential isolation and unite herself with the world. Although she refused to be lured back into a symbiotic relation with her father, she proved unable to establish a healthy, productive relation with Petrus. Her ontological insecurity drove her to escape freedom and seeked safety and protection; all she wanted was to be "allowed to creep in under his [Petrus's] wing". This relation with Petrus did not bring Lucy any joy, it only helped undermine her sense of aloneness; it helped her avoid insanity, it helped her survive. She told her father:

> *Go back to Petrus … Propose the following. Say I accept his protection. Say he can put out whatever story he likes about our relationship and I won't contradict him. If he wants me to be known as his third wife, so be it. As his concubine, ditto* (Disgrace 204).

Lucy's masochism, her longing for subjection to Petrus, in other words, is the longing for belonging, for "social existence." She accepted subordination because it "provided the subject's continuing condition of possibility" (Butler, p. 8). For Butler, power was both subordinating and producing the subject, that was, the "subject is initiated through a primary submission to power" (p. 7); therefore, by submitting herself to Petrus, Lucy is initiated as *a possible form* of post-apartheid subject. Her words to her father about her relation with Petrus indicate her desired for social existence in post-apartheid society" [Petrus] wants to remind me, I am without

protection, and i am fair game… That I would find it altogether safer to become part of his establishment (Disgrace, p. 203).

Lucy understood the new social order in which Petruses were no longer the powerless entities they used to be socially and tried to adjust or as Attridge (2000) stated "she seeks a new accommodation". Yet, she was the subject that "achieves [her] own social adjustment only by taking pleasure in obedience and subordination. This brings into play the sadomasochistic impulse structure both as a condition and as a result of social adjustment" (Adorno et al, 1950, p. 759). Under apartheid, the social order consisted in the domination of the white minority over the black majority; now it is claimed that there is equality of races. Attridge (2000) argued that in post-apartheid period "the distribution of power is no longer underwritten by racial difference, and the result was a new fluidity in human relations, a sense that the governing terms and conditions can, and must, be rewritten from scratch" (p. 105).

Petrus's relation with Lucy and Lurie might be the embodiment of this "new fluidity in human relations". In Coetzee's novel, however, this fluidity is not particularly promising. Nor is the question of racial difference wholly gone. The *dominant* sadism of apartheid social order continues to manifest its *residual* presence in *Disgrace*; Lurie's sadism arising from apartheid time has to go only to be succeeded by Petrus's post-apartheid sadism, which is summarized in his plan "to reduce Lucy to a condition of dependency" (Attridge, 2000) where Lucy

accepts to live with "no dignity... like a dog" (Disgrace, p. 205). In other words, Lucy's desire for social existence and her urge to satisfy her existential need of relating herself combine with social realities of South African society give rise to her masochism, resulting in "eventual exchange of positions between Lucy and Petrus" (Graham, p. 142).

Meanwhile, Lurie was also coming to admit these new facts: "in the old days one could have had it out with Petrus. In the old days, one could have had it out to the extent of losing one's temper and sending him packing and hiring someone in his place.... It is a new world they live in, he and Lucy and Petrus" (Disgrace, p. 117). Attridge, attempting to illustrate that how *Disgrace* makes references to and portrays post-apartheid conditions of South Africa, discusses this passage to indicate how Lurie was forced to reconsider his liberal views and accept the facts of this time and this place of the "new South Africa". Yet, this passage is also a valid reference to the sadistic character of Lurie who was lamenting the loss of his power over others. *Disgrace* indicated that although Lurie learns to push his sadistic tendencies to background and redirect them (toward dogs), the lingering spirit of apartheid manifests itself in the sadistic tendencies of Petrus.

In other words, while apartheid regime constructed sadistic character types like Lurie's, the novel suggestd, the bitter memories of apartheid period linger and give rise to a *new sadism* with the rationalization that "I have been hurt by others and my

wish to hurt them is nothing but retaliation" (Fromm, 2001, p. 124). The post-apartheid blacks, like Petrus, were still haunted and troubled by the injustices of the preceding period and saw the new society a time for revenge.

CONCLUSION

Before the collapse of apartheid, Coetzee said that South Arica's long-standing problem of unfreedom was the result of "a failure of love." This paper, accordingly, argued that this unfreedom is deeply rooted in South Africa's interpersonal symbiotic/pathological attachments where there exist only mutual dependency and hostility without any enduring emotional bond. The unavoidable result of such deformed relationality is individual deformity that continues to be present in post-apartheid era. This paper, moreover, suggested that in *Disgrace* Coetzee fictionalizes his belief that the dehumanizing structure of apartheid system rendered "horizontal intercourse" among people impossible, sanctioning only "vertical intercourse." While vertical intercourse implies hierarchical relationality, power struggle, and ignoring full humanity of others, horizontal intercourse is the true embodiment of love, care, responsibility, and equality. In other words, Coetzee's *Disgrace* depicts a world of pathological attachments, of symbiotic dependencies; it is an *insane society* where love is almost impossible and where individuals in their attempt to overcome their existential needs become subjected to the authority of others.

Vertical intercourse is the symbiotic relationality that contains violence as the result of the insoluble conflict between the sadist and the masochist. As an example of symbiotic dependency, Petrus-Lucy arrangement contains a basic antagonism that is bound to erupt, as it erupted in the cases of Soraya and Meanie. The violence latent in these pathological or symbiotic attachments, which infest new South African scene and come from apartheid era, underlies Coetzee's bleak picture in *Disgrace*, constituting its "toxicity". It is a menace right under the surface and *Disgrace* is the novel of this menace.

However, that is not to say, as some critics say, that the novel excludes the prospect of a civilized understanding or that the novel's conflicts cannot be resolved at human level. Rather, it is Coetzee's warning against the utopian belief in a smooth unproblematic transition from apartheid regime to a democratic society, against the violence and unfreedom that pathological attachments contain, and against apartheid's legacy, failure of love. It is in absence of love and prevalence of sadistic and masochistic symbiosis, *Disgrace* reveals, that the prospect of a *sane society* based on mutual understanding and equality diminishes and apartheid lingers.

REFERENCES

Adorno, T. W., Frenkel-Brunswik, E., Levinson, D., & Sanford, N. (1950). *The authoritarian personality.* New York, NY: Harper & Brothers.

Attridge, D. (2000). Age of bronze, state of grace: Music and dogs in Coetzee's Disgrace. *Novel, 34*(1), 98–121.

Attridge, D. (2002). J. M. Coetzee's Disgrace: Introduction. *Interventions*, *4*(3), 315–320.

Attwell, D. (2001). Coetzee and post-apartheid South Africa. *Journal of Southern African Studies, 27*(4), 565–567.

Attwell, D. (2015). *J.M. Coetzee and the life of writing; face-to-face with time.* New York, NY: Penguin Random House LLC.

Barnard, R. (2007). *Apartheid and beyond: South African writers and the politics of place.* Oxford: Oxford University Press.

Becker, E. (1973). *The denial of death.* New York, NY: The Free Press: A Division of Macmillan Publishing.

Boehmer, E., Iddiols, K., & Eaglestone, R. (2009). *J. M. Coetzee in context.* New York, NY: Continuum International Publishing Group.

Booker, M. K. (2009). The African historical novel. In F. A. Irele (Ed.), *The Cambridge companion to the African novel* (pp. 141–157). New York, NY: Cambridge University Press.

Butler, J. (1997). *The psychic life of power: Theories in subjection.* Stanford, CA: Stanford University Press.

Chancer, L. S. (1994). *Sadomasochism in everyday life: The dynamics of power and powerlessness.* New Brunswick, NJ: Rutgers University Press.

Chancer, L. S. (2000). Fromm, sadomasochism, and contemporary American crime. In K. Anderson, & R. Quinney (Eds.), *Erich fromm and critical criminology: Beyond the punitive society* (pp. 31–42). Urbana and Chicago, IL: University of Illinois Press.

Chancer, L. S., & Watkins, B. (2006). *Gender, race, class: An overview.* Malden and Oxford: by Blackwell Publishing Ltd.

Coetzee, J. M. (1992). *Doubling the point: Essays and interviews.* (D. Attwell, Ed.) Cambridge, MA: Harvard University Press.

Coetzee, J. M. (2000). *Disgrace.* New York, NY: Penguin Books.

Durrant, S. (2004). *Postcolonial narrative and the work of mourning: J.M. Coetzee, Wilson Harris, and Toni Morrison.* Albany, NY: State University of New York Press.

Fanon, F. (2008). *Black skin, white masks* (C. L. Markmann, Trans.)*.* London: Pluto Press.

Fromm, E. (1956). *The art of loving.* New York, NY: Harper & Row.

Fromm, E. (1974). *The anatomy of human destructiveness*. New York, Chicago, San Francisco: Holt, Rinehart and Winston.

Fromm, E. (2001). *The fear from Freedom.* London and New York: Routledge.

Fromm, E. (2003). *Man for Himself: An Inquiry into the Psychology of Ethics.* London and New York: Routledge.

Fromm, E. (2008). *The sane society.* London and New York: Routledge Classics.

Graham, J. (2009). *Land and Nationalism in fictions from Southern Africa.* New York and Abingdon: Routledge.

Hayes, P. (2010). *Coetzee and the novel: Writing and politics after beckett.* Oxford and New York: Oxford university Press.

Head, D. (2009). *The Cambridge introduction to J. M. Coetzee.* Cambridge and New York: Cambridge University Press.

Herron, T. (2005). The dog man: Becoming animal in Coetzee's "Disgrace". *Twentieth Century Literature, 51*(4), 467–490.

Jolly, R. (2006). Going to the Dogs: Humanity in J. M. Coetzee's Disgrace, The Lives of Animals, and South Africa's Truth and Reconciliation Commission. In J. Poyner, *J. M. Coetzee and the idea of the public intellectual* (pp. 148–171). Athens, Ohio: Ohio State University Press.

Laing, R. D. (1990). *The divided self: An existential study in sanity and madness.* Harmondsworth, Middlesex, England: Penguin Books Ltd.

Maslow, A. H. (1970). *Motivation and personality.* New York, NY: Longman.

Poyner, J. (2009). *J. M. Coetzee and the paradox of postcolonial authorship.* Farnham Surrey: Ashgate Publishing Limited.

Watson, S. (1996). Colonialism and the novels of J.M. Coetzee. In G. Huggan, & S. Watson (Eds.), *Critical perspectives on J.M. Coetzee* (pp. 13–37). New York, NY: St Martin's Press, Inc.

Williams, R. (1977). *Marxism and literature.* New York, NY: Oxford university Press.

The Effects of Mixed Exercise (ABOXERCISE) on Cardiovascular Endurance, Muscular Endurance and BMI level in 30- to 40–Year-Old Obese Males

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ABSTRACT

This study was done to determine the effects of combining abdominal exercise and boxing movements (ABOXERCISE) on cardiovascular endurance, muscular endurance, and BMI level. The pre–post experimental design was used and participants consisted of 20 inactive males aged 34 to 39 years, who participated in this study, having a BMI level of more than 30. All participants took part in the Aktifkan Orang Muda program in Petaling Jaya 2016. They were engaged three times a week for 24 weeks of ABOXERCISE interventions. All participants completed the tests (step test, sit-ups test, and BMI) before and after the intervention. The results showed that the cardiovascular endurance and muscular endurance increased after 24 weeks of intervention. The BMI level as well as body weight of the participant also decreased. The present study recommends ABOXERCISE as another approach for exercise practitioners. In conclusion, this study finding suggests the effectiveness of ABOXERCISE on cardiovascular endurance, muscular endurance, and BMI level of obese male communities. Future researchers may want to investigate the effectiveness of ABOXERCISE with different types of exercise or aerobic dance. It is also to find any association with physiological and psychological states of the participants.

Keywords: Abdominal exercise, boxing movements, health related fitness, obese

INTRODUCTION

Inactive lifestyle has become more common today and is very harmful to the health of every individual (James, Leach, Kalamara, & Shayeghi, 2001). World Health Organization (WHO 2003) stated that obesity is one of the major concerns of inactive lifestyle and requires immediate action to curb it.

The WHO has stated that obesity is one of today's most neglected public health problems, affecting every region of the globe and it is still increasing in both industrialized and developing country (Andrew, 2006). As for Malaysia, one out of three Malaysian people are obese. In fact, 44.5 % are more than 25% of BMI (Noor Hasliza, Mohd Azli, & Mohd Hafizi, 2016). Therefore, the best preventative method for obesity is by being actively involved in physical activity levels and exercise that helps to improve body composition and decrease body fat and body weight (Dishman & Washburn, 2004).

Aerobic training activities are used to decrease body weight and body fat, and thus to change body composition (Jorgic, Pantelic, Milanovic, & Kostic, 2011; Milanovic, Sporis, Pantelic, Trajkovic, & Aleksandrovic, 2011, 2012). Apart from walking and running as a means of aerobic exercise used to decrease body weight and change body composition, various other exercise to music models are used that includes steps, hops, turns, jumps, and other body movements (Milanovic et al., 2012). Aerobic exercise to music or dance aerobics was especially popular during the last few years of the 20th century, primarily among women. A characteristic of this kind of exercise is that all of the people who are participating in the exercise to music program realize certain movements in the same rhythm and tempo, activating different muscle groups at the same time. Aerobic dance exercises have typically been developed as an aerobic exercise to reduce body compositions, improve physical fitness performance and cardiorespiratory demand (Grant, Todd, Aitchison, Kelly, & Stoddart, 2004; Kimura & Hozumi, 2012; Pantelic, Milanovic, Sporis, & Stojanovic-Tosic, 2013).

The specific muscle exercise like abdominal exercise becomes more popular among the exerciser to increase the shape and strength of the abdominal parts (Szasz, Zimmerman, Frey, Brady, & Spaletta, 2002). For example, previous researchers found that aerobic endurance and strength of the muscles were increased after completing three times per week for 3 weeks of 20-min supine abdominal crunches (Petrofsky, Morris, Jorritsma, Bonaci, & Bonilla, 2003).

Another type of popular exercise is martial arts and combat sports that can increase health wellbeing and fitness (Cox, 1993; Woodward, 2009). These exercises are popularly investigated among youth by the researchers (Fukuda et al., 201; Violan, Small, Zetaruk, & Micheli, 1997), adolescents (Fong & Ng, 2012; Melhim, 2001), and elders (Brudnak, Dundero, & Van Hecke, 2002; Pons Van Dijik, Lenssen, Leffers, Kingma, & Lodder, 2013). As a result, significant improvement in balance and favor of the antero-posterior direction can be seen. Another study conducted by Tsang, Kohn, Chow and Singh (2009) found that body fat of the participants is better after the kung fu session compared to tai-chi chuan group. In addition, a different study reported karate session group had an increase in cardiovascular endurance after four times per week of session (Yoshimura & Imamura, 2010).

Previous researchers interestingly found that combination of different types of exercise improve some selected health-related fitness components. For example, Ossanloo, Zafari and Najar, (2012) investigated the three sessions a week for 12 weeks combination of aerobic dance, step exercise and resistance training on body composition in inactive females. The results showed that levels of BMI decreased after 12 weeks of training. Another study conducted by Hosiso, Rani and Rekonine (2013) found that 12-week aerobic exercise improved 12-m runs, push-ups, sit-ups, and flexibility performance in 22 to 28 years old of inactive female. In fact, the results also revealed that BMI and body weight decreased tremendously (Hosiso et al., 2013).

The WHO (2003) clearly suggests that both males and females need to exercise regularly in any circumstances. Prasanna (2014) found that the fun element in 60 min for 12 weeks of aerobic dance helps to reduce the stress on the cardiovascular system of 30 to 40 years old male obese adults. There is still lack of published study that focuses on exploring the effects of combining abdominal exercise and martial arts movements with music. Thus, this study aims to investigate the effects of combining abdominal exercise and boxing movements (ABOXERCISE) on selected health-related fitness components (i.e., cardiovascular endurance, muscular endurance, and BMI) among 30- to 40-year-old inactive obese males.

METHODS

Sample and Participant Selection

Twenty males aged 34 to 39 years, ($M =$ 36.45, SD = 1.43) participated in this study with different weights (M = 94.05, SD = 4.32). They were also inactive participants that had only performed some physical activity that was less than an hour per week. All participants were recruited purposively from a special training program that focuses on 30- to 40-year-old youth and having a BMI level more than 30 known as Aktifkan Orang Muda, which was conducted by Healthy Generation Malaysia.

Assessments and Measures

ABOXERCISE is a new approach of exercise accompanied by music. It is a 40-min (not including warm-up and cool down session) combination of abdominal exercise and selected boxing techniques (Table 1). As recommended by the American College of Sports Medicine (2014), the participants in this study had engaged in three times per week for 24 weeks of exercise program conducted by a sports science and certified instructor. The Faculty of Sports Science, Universiti Teknologi MARA Ethics Committee has approved the study. Participants provided written informed consent. Approximately 65% to 85% was the maximal target heart rate for the age (Cakmakci, Arslan, Taskin, & Cakmakci, 2011; Jakubec et al., 2008; Leelarungrayub et al., 2010; Skelly, Darby, & Phillips, 2003). The Carvonen method was used to determine the intensity of ABOXERCISE.

Each participant used a polar device and performed according to the target heart rate and exercise. In addition, there was no nutrition restriction or modification during the intervention program. Boxing movements consists of jab, uppercut, and hook. All these techniques were assisted by the step variations (i.e., step touch, V steps, and shuffle, lunges, and squats). Overall, the ABOXERCISE covered 60 min including warmup and cool down session or approximately 40 min only for ABOXERCISE (Table 1). As recommended by the previous researchers, high beat music (135 to 155 beats per min) was used in this study (Karageorghis & Terry, 2001; Pantelic et al., 2013). Meanwhile, the abdominal exercise consisted of crunches, knees up crunch, crisscross, legs lower, alternate toe touches, and crunches claps.

Table 1
ABOXERCISE choreography

Basic techniques of choreography	Repetition	Duration
First stage	20 × (each techniques)	
• Warming up – jab (step touch), upper cut (step touch), hook (step touch)		10 min
• Stretching	Upper body and lower body	
Second stage	10 × 3 sets	
• Step touch - Jab (left / right) + Upper cut (left / right) + hook (left / right)	20 × 3 sets	
• Crunches		
• V step - Jab (left / right) + Upper cut (left / right) + hook (left / right)	10 × 3 sets	
• Knees up crunch	20 × 3 sets	
• Shuffle lateral - Jab (left / right) + Upper cut (left / right) + hook (left / right)	10 × 3 sets	40 min
• Criss cross	20 × 3 sets	
• Jab (left / right) + Upper cut (left / right) + hook (left / right) + lunges (left / right)	10 × 3 sets	
• Alternate toe touches	20 × 3 sets	
• Jab (left / right) + Upper cut (left / right) + hook (left / right) + squats	10 × 3 sets	
• Crunches claps	20 × 3 sets	
• Step touch - Jab (left / right) + Upper cut (left / right) + hook (left / right)	10 × 2 sets	
• V step - Jab (left / right) + Upper cut (left / right) + hook (left / right)	10 × 2 sets	
• Crunches + knees up crunch + crisscross	10 × 3 sets	
• Jab (left / right) + Upper cut (left / right) + hook (left / right) + lunges + squats (left / right)	10 × 2 sets	
• Alternate toe touches + crunches claps	10 × 3 sets	
Third stage	20 × (each steps)	
• Cool down – step touch + v step		10 min
• Stretching	Upper body and lower body	

The YMCA 3-min step test is suitable for all age levels from 18 to 65 years and above (Miller, 2002). The test is also accepted because of linear relationship between workload, heart rate, and VO2 max. According to Miller (2002), all test performers should have a partner to count the carotid pulse (allow time to practice counting a partner's carotid pulse). On the signal to begin, the test performer steps up a bench 12 inches high, then the other; steps down with the first foot, then other foot. The knees must straighten with the step on the bench. The complete step represents four counts (up, up, down, down). The step is done at a cadence of 96 counts/min or 24 complete step executions/min (one four-count step every 2.5 s). At the conclusion of 3 min, the test performer quickly sits down, and the partner counts the pulse for 1 min. Finally, the score is the total 1-min posttest pulse count.

Sit-ups test (muscular endurance) with hands behind neck is to measure muscular endurance, and suitable for five through adulthood age level (Miller, 2002). The hands are interlocked behind the performer's neck, the elbows are touched to the knees, and the performer must return to the full lying position before starting the next sit-up. The performer should be cautioned not to use the arms to thrust the body into a sitting position. Finally, the score for the test is the number of sit-ups correctly performed during the 60 s. Incorrect performance for the modified sit-ups test includes failure to keep the hands interlocked behind the neck, failure to touch the knees with the elbows, and failure to return to the full-lying position.

The BMI (body composition) has been found to correlate with health risks (Miller, 2002). In this study, the BMI for each participant is computed with weight in kilograms divided height in meters [BMI = weight (kg)/height (m^2)]. In general, a BMI of 20 to 25 is associated with lowest risk of health problems, and health risks increase as the BMI increases. BMI values above 27.3 for females and 27.8 for males are indicators of excessive weight and have been associated with increased risks for several health problems, including high blood pressure and diabetes. Individuals with BMI greater than 30 are considered obese, and anyone with a BMI greater than 40 is considered morbidly obese and in need of medical attention.

Procedure

A pre–post experimental study was conducted to identify the effects of ABOXERCISE on cardiovascular endurance, muscular endurance, and BMI level in 30- to 40-year-old inactive obese (BMI level more than 30) males. All participants were engaged in 3 days per week for 24 weeks of training program. During the initial meeting, the participant underwent a health-screening test before they engaged in this exercise program. All participants were free from any injuries and health problems. They had only performed some physical activities that were less than 1 hour per week for at least a year before intervention program (Ashira, Ratanavadee, Alongkot, &

Katarina, 2010). Next, all participants were asked to complete 3 days per week of ABOXERCISE program conducted by the certified instructor with sports science background. Overall, the ABOXERCISE covered 60 min including warm-up and cool down session or approximately 40 min only for ABOXCERCISE.

RESULTS AND DISCUSSION

The preliminary assumption was normally distributed and a paired samples t-test was conducted to evaluate the effects of 24 weeks of ABOXERCISE on BMI level, muscular endurance with number of sit-ups and cardiovascular endurance as measured by heart rate measurement with step test in 30- to 40-year-old obese males. Table 2 shows that there was a statistically significant decrease in BMI level from pretest ($M = 33.00$, $SD = 1.21$) to posttest (M=29.46, SD=1.05), t (19) = 17.80, $p <$ 0.001 (two tailed). The mean decrease in BMI level was 3.54 with a 95% confidence interval ranging from 3.13 to 3.96. The eta-squared statistic (.94) indicated a large effect size.

Table 2 shows that there was a statistically significant increase in number of sit-ups test scores from pretest ($M = 25.05$, $SD = 7.19$) to posttest (M=35.40, SD=2.70), t (19) = −6.22, $p < 0.001$ (two tailed). The mean increase in number of sit-ups test scores was 1.66 with a 95% confidence interval ranging from −13.83 to −6.87. The eta-squared statistic (.60) indicated a large effect size.

There was a statistically significant decrease heart rate measurement with step test scores from pretest ($M = 126.00$, $SD = 15.34$) to posttest (M=98.00, SD=2.70), t (19) = 7.85, $p < 0.001$ (two tailed) in Table 2. The mean decrease in heart rate levels was 3.57 with a 95% confidence interval ranging from 20.54 to 35.46. The eta-squared statistic (.76) indicated a large effect size.

The results particularly showed that the BMI level reduced tremendously for the participants. Moreover, the cardiovascular endurance as measured by heart rate measurement with step test and muscular endurance as measured by the number of sit-ups correctly performed were increased significantly from pretest to posttest. The results have confirmed that using high beat music during variety of exercise like boxing and abdominal exercise improves physical and health performance (Karageorghis & Terry, 2001; Pentelic et al., 2013; Petrofsky et al., 2003; Szasz et al., 2002).

Table 2
Comparison of body mass index levels, number of sit-ups and heart rate measurement with step test for pretest and posttest

Measure	Pretest		Posttest				
	M	*SD*	*M*	*SD*	*t*	*p*	ES
BMI Level	33.00	1.21	29.46	1.05	17.80	<0.001	0.94
Number of Sit- ups	25.05	7.19	35.40	2.70	-6.22	<0.001	0.60
Heart Rate	126.00	15.34	98.00	5.29	7.85	<0.001	0.76

Note: ES = Eta Squares

CONCLUSION

The present study revealed that the combination of abdominal exercise and boxing movements (ABOXERCISE) improved the cardiovascular endurance, muscular endurance, and BMI level in 30- to 40-year-old obese males. The results particularly showed that cardiovascular endurance (as measured by YMCA step test) and muscular endurance (as measured by sit-ups test) increased significantly from pretest to posttest. Moreover, the BMI also reduced tremendously for the participants. The results have confirmed that using high beat music during exercise improves physical and health performance (Karageorghis & Terry, 2001; Pentelic et al., 2013). The benefits to combine the abdominal exercise (e.g., Petrofsky et al., 2003; Szasz et al., 2002) and boxing movements accompanied by the music seems to be not only another approach to improve BMI level, cardiovascular and muscular endurances but also to learn some of self-defence techniques (Brudnak et al., 2002; Fong & Ng, 2012; Fong et al., 2012; Fukuda et al., 2013; Hosiso et al., 2013; Jackson, Edinginton, Cooper, & Merriman, 2012; Melhim, 2001; Ossanloo et al., 2012; Pons Van Dijik et al., 2013; Tsang et al., 2009; Violan et al., 1997; Yoshimura & Imamura, 2010). Therefore, exercise practitioners and aerobics dance instructors may consider suggesting ABOXERCISE to their clients as an effective approach to promote health wellbeing and decrease the percentage of obese people in Malaysia (Noor Hasliza et al., 2016).

In conclusion, this study finding suggests the effectiveness of ABOXERCISE on cardiovascular endurance, muscular endurance, and BMI level of obese male communities. Therefore, future researchers may differ from other samples, study designs that compares between two groups, number of exercises and duration of the intervention. In fact, the physiological and psychological state of the participants may also be considered for future studies in order to find the effectiveness of ABOXERCISE intervention.

ACKNOWLEDGMENTS

REFERENCES

American College of Sports Medicine. (2014). *ACSM's guidelines for exercise testing and prescription* (9th ed). Philadelphia, PA: Wolters Kluwer/Lippincott Williams & Wilkins.

Ashira, Hl., Ratanavadee, N., Alongkot, Ei., & Katarina, T. B. (2010). Effect of once a week endurance exercise on fitness status in sedentary subjects. *Journal of the Medical Association of Thailand*, *93*(9), 1070–1074.

Andrew, M. P. (2006). The emerging epidemic of obesity in developing countries. *International Journal of Epidemiology*, *35*(1), 93–99.

Brudnak, M., Dundero, D., & Van Hecke, F. (2002). Are the 'hard' martial arts, such as the Korean martial art, Taekwondo, of benefit to senior citizens? *Medicine Hypotheses, 59*(4), 485–491.

Cakmakci, E., Arslan, F., Taksin, H., & Cakmaci, O. (2011). The effects of aerobic dance exercise on body composition changes associated with weight change in sedentary women. *Selcuk University Journal of Physical Education and Sport Science*, *13*(3), 298–304.

Cox, J. C. (1993). Traditional Asian martial arts training. *A Review Quest*, *45*, 366–388.

Dishman, K., & Washburn, A. (2004). *Physical activity epidemiology*. Champaign: HK

Fong, S., & Ng, G. (2012). Sensory integration and standing balance in adolescent taekwondo practitioners. *Pediatric Exercise Science*, *24*(1), 142–151.

Fukuda, D. H., Stout, J. R., Kendall, K. L., Smith, A. E., Wray, M. E., & Hetrick, R. P. (2013). The effects of tournament preparation on anthropometric and sport-specific performance measures in youth judo athletes. *Journal of Strength Conditioning Research*, *27*(2), 331–339.

Grant, S., Todd, K., Aitchison, T., Kelly, P., & Stoddart, D. (2004). The effects of a 12 week group exercise programme on physiological and psychological variables and function in overweight women. *Public Health*, *118*(1), 31–42.

Hosiso, M., Rani, S., & Rekoninne, S. (2013). Effects of aerobic exercise on improving health related physical fitness components of Dilla university sedentary female community. *International Journal of Scientific and Research Publications, 3*(12), 2250–3153.

Jakubec, A., Stejskal, P., Kovacova, L., Elfmark, M., Rehova, I., Botek, M., & Petr, M. (2008). Changes in heart rate variability after a six month long aerobic dance or step – dance programme in women 40–65 years old: The influence of different degrees of adherence, intensity and initial levels. *Acta University Palacki Olomuc Gymn*, *38*(2), 35–44.

Jackson, K., Ediginton-Bigelow, K., Cooper, C., & Merriman, H.A. (2012). Group Kickboxing program for balance, mobility, and quality of life in individuals with multiple sclerosis: a pilot study. *Journal of Neurologic Physical Therapy*, *36*(3), 131–137. doi:10.1097/NPT.0b013e3182621eea

James, P. T., Leach, R., Kalamara, E., & Shayeghi, M. (2001). The worldwide obesity epidemic. *Obesity: A Research Journal*, *9*(11), 2285–2335. doi:10.1038/oby.2001.123

Jorgic, B., Pantelic, S., Milanovic, Z., & Kostic, R. (2011). The effects of physical exercise on the body composition of the elderly: A systematic review. *Facta Universitatis, Series: Physical Education and Sport*, *9*(4), 439–453.

Karageorghis, C. I., & Terry, P. C. (2001). The magic of music in movement. *Sport Medicine Today*, *5*, 38–41.

Kimura, R., & Hozumi, N. (2012). Investigating the acute effect of an aerobic dance exercise program on neuro-cognitive function in the elderly. *Psychology Sport Exercise, 13*(5), 623–629.

Leelarungrayub, D., Saidee, K., Pothongsunun, P., Pratanaphon, S., Yankai, A., & Bloomer, R. J. (2011). Six weeks of aerobic dance exercise improves blood oxidative stress status and increases interleukin-2 in previously sedentary women. *Journal of Bodywork and Movement Therapies*, *15*(3), 355–362. doi:10.1016/j.jbmt.2010.03.006

Melhim, A. F. (2001). Aerobic and anaerobic power responses to the practice of taekwon – do. *British Journal of Sports Medicine, 35*(4), 231–234. doi:10.1136/bjsm.35.4.231

Milanovic, Z., Pantelic, S., Trajkovic, N., & Sporis, G. (2011). Basic antropometric and body composition characteristics in elderly population: A systematic review. *Facta Universitatis, Series: Physical Education and Sport*, *9*(2), 173–182.

Milanovic, Z., Sporis, G., Pantelic, S., Trajkovic, N., & Aleksandrovic, M. (2012). The effects of physical exrcise on reducing body weight and body composition of obese middle aged people. A systematic review. *Health Medicine*, *6*, 2175–2189.

Miller, D. K. (2002). *Measurement by the physical educator why and how* (4th ed.). New York, NY: McGraw-Hill.

Noor Hasliza, N., Mohd Azli, A., & Mohd Hafizi, A. (2016, June 21). 1 daripada 3 orang malaysia gemuk. *Kosmo Online*. Retrieved on October 22, 2016 from http://www.kosmo.com.my

Ossanloo, P., Zafari, A., & Najar, L. (2012). The effects of combined training aerobic dance, step exercise and resistance training on body composition in sedentary females. *Annals of Biological Research*, *3*(7), 3667–3670.

Pantelic, S., Milanovic, Z., Sporis, G., & Stojanovic-Tosic, J. (2013). Effects of twelve-week aerobic dance exercises on body compositions parameters in young women. *International Journal of Morphology*, *31*(4), 1243–1250.

Petrofsky, J. S., Morris, A., Jorritsma, R., Bonacci, J., & Bonilla, T. (2003). Aerobic training during abdominal exercise with a portable abdominal machine. *The Journal of Applied Research, 3*(4), 394–401.

Pons van dijik, G., Lenssen, A. F., Leffers, P., Kingma, H., & Lodder, J. (2013). Taekwondo training improves balance in volunteers over 40. *Front Aging Neuroscience*, *3*, 5–10. doi: 10.3389/fnagi.2013.00010

Prasanna, S. R. (2014). Twelve weeks of aerobic dance impact on cardiovascular parameters of male

obese adults. *International Journal of Physical Education, Fitness and Sports, 3*(1), 51–55.

Skelly, W. A., Darby, L. A., & Phillips, K. (2003). Physiological and biomechanical responses to three different landing surfaces during step aerobics. *Journal Exercise Physiology Online*, *6*(2), 70–79.

Szasz, A., Zimmerman, A., Frey, E., Brady, D., & Spalletta. (2002). An electromyographical evaluation of the validity of the 2-minute sit-up section of the army physical fitness test in measuring abdominal strength and endurance. *Military Medicine*, *167*(11), 950–953

Tsang, T. W., Kohn, M., Chow, C. M., & Singh, M. H. (2009). A randomized controlled trial of kung fu training for metabolic health in overweight/obese adolescents: The martial fitness study. *Journal of Pediatric Endocrinology and Metabolism*, *22*(7), 595–607.

Violan, M. A., Small, E. W., Zetaruk, M. N., & Micheli, L. J. (1997). The effect of karate training on flexibility, muscles strength, and balance in 8 to 13 year old boys. *Paediatric Exercise Science, 9*(1), 55–64.

WHO (2003) Global strategy on diet, physical activity and health. Retrieved October 20, 2012, from http:/www.who.int/dietphysicalactivty/media/en/gsfs pa.

Woodward, T. W. (2009). A review of the effects of martial arts practice on health. *Wiconsin Medical Journal*, *108*(1), 40–43.

Yoshimura, Y., & Imamura, H. (2010). Effects of basic karate exercises on maximal oxygen uptake in sedentary collegiate women. *Journal of Health Sciences, 56*(6), 721–726.

SOCIAL SCIENCES & HUMANITIES

Subjective Well-Being among "Left-Behind Children" Of Labour Migrant Parents in Rural Northern Vietnam

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ABSTRACT

Studies worldwide have shown that, besides positive economic and social impacts, labour migrant parents also cause negative effects to the well-being of those they leave behind, especially children. However, this study orientation has not generated significant interest in Vietnam. This article indicates the results of a survey on 469 left-behind children of labour migrant parents in rural areas by comparing them with a control group of 650 children living with their parents in three rural areas of North Vietnam including Phu Tho, Bac Ninh, and Ha Nam provinces. The Keyes's Mental Health Continuum-Short Form (MHC-SF) was used for this study. It is shown that children whose parents work away from home have lower subjective well-being than those living with their parents; children with migrant mothers or with both migrant parents also achieve lower scores of subjective well-being than those with migrant fathers. Factors such as a child's self-assessment of his or her academic and life success and the relationship between the child and his or her migrant parents have significant influence to the child's subjective well-being.

Keywords: Labour migrant parents, "left-behind children", subjective well-being

INTRODUCTION

In Vietnam, it has been an obvious trend that the population in general and parents in particular leave the countryside to bigger cities or more developed countries for employment opportunities. According to the General Statistics Office, in 2015, the number of domestic migrants aged 15 years and older is approximately 1.24 million people in which women account for 57.7%, and up to 78.4% of them participate in the

workforce. The majority of these people move to urban areas. Furthermore, by the end of 2015, 500,000 people in Vietnam were engaged in labour export to different 40 countries and territories (General Statistics Office, 2016).

Many migrant workers are forced to leave their children at home with caregivers, particularly in families with both husband and wife working away from home. Parental migration can provide positive socioeconomic impacts, especially in terms of financial support that helps maintain living and learning conditions of their children at home (Binh, 2012; Piper, 2012; Thinh, 2012). In addition to immediate socioeconomic benefits that can be seen easily, parental migration has also caused negative psychological effects to left-behind children in rural areas.

Labour Migrant Parents and Left-Behind Children

Labour migrant parents in this study is understood as fathers and mothers who have to leave their homeland—their permanent residential area to work in another province or city (in Vietnam, mainly to the Southeast, especially to Ho Chi Minh City) or to an entirely different country or territory (as exported labours). It was defined by author Nguyen Viet Cuong (2015) that parents are considered as migrant parents if they and their children have not met within 1 month or longer (Nguyen, 2015). In this study, we carried out the survey with only parents working away from home for 6 months and longer.

Left-behind children in this study is understood as those whose fathers or mothers (or both parents) migrate to cities or to a different country or territory for more than 6 months and are younger than age 18 years (Graham & Jordan, 2011). These children are left in their hometown and nurtured by caregivers who are usually their grandparents or fathers (in case of mother working away from home) or mothers (in case of migrant father).

Subjective Well-being

According to Keyes, the subjective well-being is the perception and evaluation of an individual on her or his life, emotional symptoms and psychological and social function. He supposed that the well-being is inclusive of three components of emotional, psychological, and social well-being (Keyes, 2002).

Emotional well-being is expressed through a series of signs reflecting positive emotional symptoms. It is measured by positive emotional state or life satisfaction in general.

Psychological well-being is reflected in the self-acceptance and self-satisfaction; positive relationships with others; personal development; life goals; master of the surroundings; and self-control. A person with psychologically well-being is satisfied with almost everything of herself or himself. He or she has warm and trustful relationships. He or she believes that he or she will become into a better person, being oriented in life, can control his surroundings to satisfy all his or her needs and make his or her own decisions (Ryff & Keyes, 1995).

Social well-being is shown by the satisfaction with interpersonal relationships and social surroundings. This dimension is evaluated through public and social criteria inclusive of social cohesion, social realization, social inclusion, social acceptance, and social contributions. People obtain social well-being when they find that operation of the society is meaningful and understandable for them and that society has the potential for human development; they can feel that they belong to the society and feel their contribution to the society (Keyes, 1998).

Overviews

Studies worldwide on the impacts of parents working away from home to left-behind children have been widely conducted in China and ASEAN countries because parental migration for employment has become very common in these regions. These studies indicates that working parental migration has negative influences to *children's learning*, particularly, their academic performance is reduced (Zhao, Yu, Wang, & Glauben, 2014), or their learning process is interrupted (Jia & Tian, 2010). Children find difficulty in communicating with their teachers and friends (Luo, Gao, & Zhang, 2011). Rural children having absent parents have *more negative emotions* than those living with parents. They feel lonely and bored (Jia & Tian, 2010; Jingzhong & Lu, 2011; Piper, 2012; Su, Li, Lin, Xu, & Zhu, 2012). According to Ye Jingzhong and Pan Lu (2011, p. 372), "loneliness" is the most common word that left-behind children

in rural areas used to describe their feelings; children with absent parents also show their worry, insecurity, and fear (Fan, Su, Gill, & Birmaher, 2010).

According to these studies, children of migrant parents have trouble in *self-assessment*, for example, they are un-self-confident, aloof, and isolated (Jingzhong & Lu, 2011; Shen & Shen, 2014). They also have low self-assessment (Wang, Ling, Su, Cheng, Jin, & Sun, 2014; Xiaojun, 2015). Parental migration due to employment does not only cause negative impacts to children's learning, emotions and self-assessment, but it also creates *negative behaviors* on left-behind children, boys tend to display more negative behaviors than girls (Fan et al., 2010; Hu, Lu, & Huang, 2014; Wen & Lin, 2012).

In terms of *the children's subjective well-being*, these studies show that left-behind children in rural areas due to parental migration have lower scores of subjective well-being than the group of children living with their parents. Graham and his colleagues carried out a survey with 3,876 parents/caregivers of children aged 3 to 12 years in four countries including Indonesia, the Philippines, Thailand, and Vietnam on the children's well-being. The researcher group revealed that children with migrant fathers in Indonesia and Thailand felt less happy than those living with their parents. However, the same evidence was not found in Vietnam and the Philippines (Graham & Jordan, 2011). In China, Wei Lu's research also showed that the quality of life of these children was reduced, and the conditions of

health care were not guaranteed (Lu, 2011). The evidence was also found in a study of Su S. et al, accordingly, children with both migrant parents in general achieved the lowest score of well-being in three surveyed children groups inclusive of children with a migrant father or mother, children of non-migrant parents and children with both parents working away from home (Su et al., 2012). A study by Wen and Line (2012) with 704 children aged 8 to 18 years in rural areas (including children with absent parents, children with absent father or mother, and those living with parents) in five districts of Hunan province (China), revealed that children suffered from parental migration were less satisfied with their life and academic performance than those in non-migrant households, especially children whose mothers worked away. Only 33.33% of children of migrant mothers were satisfied with their life and learning, this proportion was respectively 46.3% and 42.62% in children with absent fathers and those with both migrant parents (Wen & Lin, 2012). Similar results were also reported in a study by Donald J. Treiman and Qiang Ren when they noticed clear evidence showing that "children who have absent parents are the least happy and have the highest depression scores" (Zhao et al., 2014, p. 22).

In Vietnam, the studies on migrants have been focused in directions such as "migration trends," "lives of migrants" and "research for policy recommendation" (ACTIONAID, 2012); or "the role of migrant workers to the social and economic development"; "social problems of migrant

workers"; and "proposing measures to help migrants access to social services" (Kham & Quyet, 2015a, b). A common characteristic of the studies on migrants in Vietnam is showing "disadvantages that migrant workers encounter in their work and daily life at the destination places. In terms of policy perspective, these studies emphasized a "blank" status of policies for migrants in urban areas" (ACTIONAID, 2012, p. 17).

It can be noted that studies on left-behind people including children and the elderly are less thorough. However, there are a few studies on the impact of working migrant parents to children left-behind. As aforementioned, Graham et al. (2011) carried out a survey with 3,876 children (aged 3–12 years) on well-being of children in four Southeast Asian countries (including Vietnam) based on opinions of caregivers. However, this study showed that in Vietnam, there was no difference in well-being between children whose parents work away from home and the group of children living with their parents (Graham & Jordan, 2011). Using data from the Young Lives survey in 2007 and 2009 with 7,725 children aged 5 to 8 years in four countries Ethiopia, India, Peru and Vietnam, author Nguyen Viet Cuong supposed that migrant parents helped improve the financial situation of their families, but did not increase their children's health and cognitive abilities. Parents working away from home were the cause of health and cognitive problems in children in Vietnam as well as in Peru and India. Children who suffered from long-term parental migration tended to be affected

more negatively than those with short-term migrant parents. The lack of communication between parents and children as well as parental care was the leading cause of nutrition and learning problems in children (Nguyen, 2015).

Thus, we can see that there have been very a few studies on negative impacts of parental migration to left-behind children through the self-assessment of these children. This is definitely a research gap in Vietnam. The purpose of this article is to (i) describe the current state of the subjective well-being of children whose parents work away from home through comparing them with a group of children living with parents; (ii) compare the subjective well-being among groups of children of migrant parents and; (iii) indicate individual and family factors that forecast the subjective well-being of left-behind children. It is assumed that the subjective well-being of children in families with parents working away from home is lower than the same children living with parents; children whose mothers migrate have lower well-being scores than those with fathers working away from home and factors relative to children's family can better predict the subjective well-being of left-behind children.

METHODS

Participants

This study involves quantitative cross-sectional research. Samples were selected by cluster and simple random sampling. The sampling process included three parts. First, three provinces in Northern Vietnam

having the highest percentage of migrant workers were defined by the researcher group. Then, we prepared a list of districts in these provinces, from which a district per province was selected randomly. Finally, communes of the district were also listed and one of these communes was selected as the study site on a random basis. Total number of surveyed samples include 1,119 children aged 9 to 15 years (469 children of migrant parents, 650 children of non-migrant parents). The survey was carried out in three sites in northern Vietnam, specifically in Lam Thao district, Phu Tho province; Gia Binh district, Bac Ninh province; and Ly Nhan district, Ha Nam province. The site selection is based on the fact that the ratio of local people working away from home in these sites is higher than that of other regions in the north of Vietnam. The questioned children were studying from 4th to 9th grade at primary and secondary schools. The study samples are described in detail in Table 1.

Materials and Procedure

Mental Health Continuum-Short Form/ MHC-SF of Keyes was applied in the research. (Keyes, 1998, 2002). This short version is derived from the full form (Mental Health Continuum-Long Form) of 40 items, which was developed based on the Affect Balance Scale of Bradburn (1969), Psychological Well-being Scale of Ryff (1995), and Social Well-being Scale of Keyes (1998) (Ha, 2015a, 2015b). MHC-SF scales were Vietnamized by author Truong Thi Khanh Ha (2015a) and adaptable to

Table 1
Description of surveyed samples

Criteria	Classification	Left-behind children (*N*=469)	Non–Left-behind children (*N* = 650)	Total (*N* = 1119)
1. Sex	Male	50.1% (*n* = 235)	47.1% (*n* = 306)	48.3% (*n* = 541)
	Female	49.9% (*n* = 234)	52.9% (*n* = 344)	51.7% (*n* = 578)
2. Age	Aged 9–11 years	48.6% (*n* = 227)	48.8% (*n* = 312)	48.5% (*n* = 539)
	Aged 12–15 years	51.4% (*n* = 240)	51.6% (*n* = 333)	51.5% (*n* = 573)
Mean (SD)		*11.70 (1.59)*	*12.01 (1.68)*	11.88 (1.65)
3. Level of school	Primary school	49.3% (*n* = 231)	51.7% (*n* = 336)	50.7% (*n* = 567)
	Secondary school	50.7% (*n* = 238)	48.3% (*n* = 314)	49.3% (*n* = 552)
4. Length of parental migration	≤2 years	39.0% (*n* = 139)	-	-
	2- 5 years	33.4% (*n* = 119)	-	-
	> 5 years	27.5% (*n* = 98)	-	-
Mean (SD)		*4.24 (3.90)*	-	-
5. Who works far away from home	Father	39.4% (*n* = 176)	-	-
	Mother	23.5% (*n* = 105)	-	-
	Two parents	37.1% (*n* = 166)	-	-
6. Residential area of children	Phu Tho	23.9% (*n* = 112)	123.4% (*n* = 152)	23.6% (*n* = 264)
	Bac Ninh	32.8% (*n* = 154)	34.2% (*n* = 222)	33.6% (*n* = 376)
	Ha Nam	43.3% (*n* = 203)	42.5% (*n* = 276)	42.8% (*n* = 479)

Vietnamese teenagers. The questionnaire used for the survey is in Vietnamese. This study indicated that the MHC-SF subjective well-being scale has high reliability on samples of 861 students. In particular, the emotional, social, and psychological well-being scales have the Cronbach's Alpha reliability coefficients of 0.81, 0.81, and 0.78, respectively. The entire MHC-SF scale has the reliability of 0.88(Ha, 2015a).

The MHC-SF scale includes 14 items measuring three dimensions: emotional well-being (three items), psychological well-being (six items), and social well-being (five items). With each item there are six answer levels and are scored as follows: *not even once* = 1 point; *twice a month* = 2 points; *about once per week* = 3 points; *approximately once every 2, 3 weeks* = 4 points; *nearly every day* = 5 points; and *daily* = 6 points. Factor analysis of Cronbach's Alpha reliability coefficient indicates that three sub-scales and the grand scale have a coefficient of reliability that can ensure the deployment of the research, specifically, sub-scales of emotional, psychological, and social well-being having Cronbach's Alpha = 0.767, 0.699, and 0.680, respectively, and the general well-being scale achieving Cronbach's Alpha = 0.834. Well-being scale and sub-scales ensure the normal distribution based on Skewness and Kurtosis' indicators, specifically as follows: emotional well-being (Skewness = −0.510 and Kurtosis = −0.160);

psychological well-being (Skewness= −0.827 and Kurtosis= − 0.121); social well-being (Skewness = −0.197; Kurtosis = −0.752); and psychological well-being (Skewness = −0.578 and Kurtosis = 0.165).

A factor analysis was conducted in our research. Its results reveal that 14 items are clearly divided into three factor groups. Three factors have Eigenvalues greater than 1, explaining 48.29% of the data's variability. The factor loading varies from 0.341 to 0.855, greater than 0.3. KMO coefficient is 0.88 with a significance level of $p < 0.001$. The correlation between the items ranges from 0.163 to 0.858. Items are divided into three factor groups inclusive of emotional well-being, social well-being, and psychological well-being, specifically as Table 2.

Table 2
Factor analysis of MHS-SF scale

You feel….	Emotional well-being	Social well-being	Psychological well-being
1. Interested in life	0.855		
2. Content/satisfied	0.819		
3. Happiness, joy	0.702		
4. That the way society works is logical		0.790	
5. That people are basically good		0.728	
6. That our society is becoming a better place for all people		0.644	
7. That you belong to a community		0.569	
8. That you have something important to contribute to the society		0.417	
9. That you experience things that will make you grow as a person			0.751
10. That you are good at managing responsibility for your daily life			0.618
11. That you have warm and confident relationships with others			0.597
12. That life has a purpose			0.565
13. That you have the confidence to have your own thoughts and that you dare to express them			0.561
14. That you like most of your personality			0.341

Research Process. First, we contacted and received the consent of selected schools' managing boards and homeroom teachers to carry out the survey with their students. Then, within each grade, the researchers chose one group of children whose parents work away from home, and another group of children living with their parents in order to conduct the survey. Each student was received a survey sheet/questionnaires and

completed it on their own. The students gathered at a meeting hall of each school under the guidance of the research team's members.

Processing Techniques. The data analysis was performed using the Statistical Package for the Social Sciences (SPSS version 20.0).

RESULTS

As aforementioned, we have assumed that the subjective well-being of left-behind children due to parental migration is lower than that of children living with their parents, the results are shown in Table 3.

In general, scores of subjective well-being in children living with their parents is higher than that of children whose parents work away from home. The average scores of children living with their parents = 4.26, while scores of children of parental migration = 4.10. The difference was statistically significant with $t = 2.669$, $p < 0.001$.

Considering each aspect of children's well-being expressions, children whose parents work away from home showed lower emotional and psychological well-being than those living with parents. The average scores of emotional well-being achieved by left-behind children is 0.21 point lower than those of children of non-migrant parents ($t = 2621$, $p < 0.001$).

Furthermore, the scores of psychological well-being of children suffered from parental migration is also 0.37 point lower than those of children living with parents ($t = 6.287$, $p < 0.001$).

One notable point is that there is no statistical difference in social well-being between the group of children with migrant parents and the group of children with non-migrant parents. The average scores of these two groups is 3.74 ($t = 0.034$, $p > 0.05$).

One of the hypotheses raised by the survey team is that children with mother or both parents working away from home have lower subjective well-being than those with migrant father. The results are revealed in Table 4.

Table 3

Comparison of subjective well-being of children of migrant parents with those living with their parents

Groups of children		N	Mean	SD	df	t	p
Emotional Well-being	LBC	422	4.37	1.31	1021	2.621	0.00
	Non-LBC	601	4.58	1.20			
Social Well-being	LBC	452	3.74	1.18	1009	0.034	0.97
	Non-LBC	586	3.74	1.14			
Psychological Well-being	LBC	424	4.08	1.04	1021	6.287	0.00
	Non-LBC	599	4.45	0.80			
Well –being (Total)	LBC	358	4.10	0.98	870	2.669	0.00
	Non-LBC	514	4.26	0.83			

Note: LBC- Left-behind children; Non-LBC- Non- Left behind children

Table 4
Comparison of subjective well-being of children of migrant parents (N = 464)

Criteria	Classification	Emotional Well-being		Social Well-being		Psychological Well-being		Well-being (Total)	
		Mean (SD)	t, F, df, p	Mean (SD)	t, F, df, p	Mean (SD)	t, F, df, p	Mean (SD)	t, F, df, p
1. Sex	Male	4.38 (1.36)	t(420) = 0.053, p = 0.958	3.74 (1.19)	t(423) = -0.112, p = 0.911	4.02 (1.05)	t(422) = -1.196, p =.233	4.07 (0.98)	t(356) = -0.507, p = 0.612
	Female	4.37 (1.27)		3.75 (1.18)		4.14 (1.04)		4.12 (0.98)	
2. Age	9–11 years old	4.64 (1.23)	t(418) = 4.024, p = 0.000	4.03 (1.07)	t(421) = 5.119, p = 0.000	4.16 (1.05)	t(421) = 1.500, p = 0.134	4.31 (0.93)	t(355) = 3984, p = 0.000
	12–15 years old	4.13 (1.34)		3.46 (1.21)		4.01 (1.03)		3.90 (0.98)	
3. Educational stage	Primary school	4.64 (1.23)	t(420) = 3.979, p = 0.000	4.02 (1.07)	t(423) = 4.808, p = 0.000	4.17 (1.05)	t(422) = 1.611, p = 0.100	4.30 (0.92)	t(356) = 3.871, p = 0.000
	Secondary school	4.13 (1.34)		3.48 (1.23)		4.00 (1.04)		3.90 (0.99)	
4. Length of parental migration	(1) ≤ 2 years	4.29 (1.30)	F(2, 319) = 2.039, p = 0.130	3.55 (1.24)	F(2, 321) = 6.444, p = 0.000	3.88 (1.05)	F(2, 325) = 6.497, p = 0.000	3.91 (0.98)	F(2, 273) = 6.253, p = 0.000
	(2) 2- 5 years	4.60 (1.16)		3.93 (1.11)		4.32 (1.00)		4.32 (0.90)	(3) > (2), p = 0.050
	(3) > 5 years	4.55 (1.25)		4.11 (1.09)		4.28 (1.03)		4.33 (0.95)	(2) > (1), p = 0.050
5. Who works far away from home	(1) Father	4.59 (1.29)	F(2, 399) = 5.336, p = 0.000	3.85 (1.12)	F(2, 402) = 3.671, p = 0.020	4.24 (1.07)	F(2, 401) = 4.087, p = 0.010	4.25 (0.97)	F(2, 336) = 5.802, p = 0.000
	(2) Mother	4.04 (1.41)		3.45 (1.22)		3.84 (1.06)		3.77 (1.02)	
	(3) Two parents	4.30 (1.28)		3.81 (1.21)		4.08 (1.00)		4.11 (0.97)	(1) > (2), p = 0.001
6. Children's residential area	(1) Phu Tho	4.23 (1.25)	F(2, 419) = 1.577, p = 0.000	3.65 (1.15)	F(2, 422) = 27.70, p = 0.000	4.02 (1.00)	F(2, 421) = 22.09, p = 0.000	4.00 (0.90)	F(2, 355) = 33.95, p = 0.000
	(2) Bac Ninh	4.84 (1.17)		4.29 (0.98)		4.50 (0.92)		4.58 (0.80)	
	(3) Ha Nam	4.06 (1.35)		3.36 (1.19)		3.76 (1.05)		3.69 (0.98)	
7. The frequency of communication between children and parents	Less frequent	4.22 (1.34)	t(416) = -2.620, p = 0.009	3.66 (1.17)	t(420) = -1.409, p = 0.160	3.97 (1.02)	t(419) = -2.349, p = 0.019	3.96 (0.99)	t(422) = -1.196, p = 0.010
	Frequent	4.55 (1.26)		3.82 (1.19)		4.21 (1.06)		4.23 (0.95)	

The data in Table 4 illustrates that children having mother working away from home obtain lower scores on subjective well-being than those with father migrating, specifically, the average scores of these two groups, respectively, are 3.77 and 4.11 and $p < 0.001$.

In terms of migration time, the figures in Table 4 indicate an overall trend in which the group of children with long-term migrant parents have higher subjective well-being than those with short-term migrant parents. In particular, the average scores of children whose parents work away from home for more than 5 years, from 2 to 5 years, and less than 2 years are respectively 4.33, 4.32, and 3.91, and $F(2, 273) = 6.253$, $p < 0.001$.

The figures in Table 4 also reveals that children aged 9 to 11 years show higher subjective well-being than those aged 12 to 15 years, the average scores of these two age groups is 4.31 and 3.90, respectively, $t(355) = 3.984$, $p < 0.001$. However, considering each symptom of subjective well-being indicates that there is no difference in psychological well-being between the two children groups ($t(421) = 1.500$, $p > 0.05$).

In terms of the frequency of communication between children and their migrant parents, the data in Table 4 shows that children with frequent communication with their parents have higher subjective well-being than those of less frequent contact with their parents. Specifically, the average scores of these two groups are respectively 4.23 and 3.96, $t(422) = -1.196$ and $p < 0.001$.

Elementary students with migrant parents were reported to have higher scores on subjective well-being than the high school group (the average score= 4.30 and 3.90, $t(356) = 3.871$, $p < 0.001$). However, no differences are statistically significant in terms of psychological well-being between these two groups of children ($t(422) = 1.611$, $p > 0.05$).

Children with parents working away from home in Bac Ninh achieve higher scores on subjective well-being than those in Phu Tho and Ha Nam provinces. The average scores of the children in Bac Ninh, Phu Tho, and Ha Nam provinces are respectively 4.58, 4.00, and 3.59, $F(2, 355) = 33.95$, $p < 0.001$.

Considering the gender aspects of children with migrant parents, data in Table 4 shows that no statistical differences are found between boys and girls, $t(356) = -0.507$, $p > 0.05$.

One of our research questions is which individual and family factors could anticipate the children's subjective well-being?

In order to model the impact on children's subjective well-being, an analysis of multiple regression was carried out by establishing Enter's models (at the same time with putting the variables into the model). The formula of multiple regression model in this research is shown as follows:

$$Y_{w.b} = \beta 0 + \beta 1(Xi) + \beta 2(X2) + \ldots + \beta k(Xk)$$

where "$Y_{w.b}$" is the indicator of children's subjective well-being; "β0" is a constant; "β1" is the regression coefficients; "Xi" is the independent variables included in the model; "k" is independent variables of the model.

We set up the regression model with two variable groups at individual and family levels: Model 1 includes only independent variables belonging to personal characteristics of children, specifically including age; self-esteem; sex; educational stages/level of school; self-assessment of academic performance; self-assessment of life success. Model 2 has the variables that had been included in the Model 1 and additional independent variables of the children's family, inclusive of the number of siblings living with them; length of parental migration; father or mother who works away from home; frequency of parents' visits and frequency of communication between children and their parents. In total, six variables under the group of children's personal characteristics and five variables of family group were analyzed in the models. Prior to the multiple regression, checking for assumption violations was carried out to ensure that the assumptions was basically met.

Application of multiple regression analysis has provided us in Table 5.

Table 5
Multiple regression model predicting the subjective well-being of children of migrant parents

Model		Unstandardized Coefficient		Standardized Coefficient	t	p	F	R	R^2	ΔR^2
		B	SE	$Beta$						
	(Constant)	2.030	0.786		2.584	0.010**	12.122	0.540	0.254	0.233
	Self-Esteem	0.054	0.016	0.209	3.402	0.001***				
	Ages	0.018	0.073	0.031	0.254	0.800				
	Sex	-0.066	0.118	-0.033	-0.559	0.577				
1	Level of School	-0.481	0.231	-0.244	-2.081	0.039*				
	Self-assessment of success in life (score scale 1–5)	0.173	0.064	0.161	2.715	0.007**				
	Self-assessment of academic performance (score scale 1–5)	0.274	0.069	0.258	3.954	0.000***				
	(Constant)	1.336	0.782		1.708	0.039*	10.150	0.590	0.348	0.314
	Self-Esteem	0.040	0.015	0.153	2.583	0.010**				
	Ages	-0.001	0.070	-0.001	-0.009	0.993				
	Sex	-0.049	0.112	-0.025	-0.433	0.665				
	Level of School	-0.310	0.223	-0.157	-1.391	0.166				

Table 5 *(continue)*

Model	Unstandardized Coefficient		Stand-ardized Coeffi-cient	t	p	F	R	R^2	ΔR^2
	B	SE	$Beta$						
2 Self-assessment of success in life (score scale 1–5)	0.202	0.063	0.188	3.192	0.002**				
Self-assessment of academic performance (score scale 1–5)	0.303	0.066	0.285	4.582	0.000***				
Number of siblings whom children living with	0.010	0.061	0.009	0.157	0.875				
Length of parental migration	0.068	0.015	0.264	4.409	0.000**				
Father or mother working away from home	-0.096	0.064	-0.087	-1.501	0.135				
Frequency of parents' visit	0.057	0.057	0.059	1.014	0.312				
Frequency of communication between parents and children	0.142	0.046	0.184	3.056	0.003**				

Note: Significance level *p < 0.05; **p < 0.01; ***p < 0.001

Testing the appropriateness of the model showed that the *F*-statistic in both models is at a very high significance level (p < 0.001). Therefore, it can be confirmed that the database is appropriate for these two models. In Model 1, six variables of children's individual characteristics can explain 23.3% of variation of indicators of subjective well-being in children with migrant parents. In Model 2, when the variable group of family factors (five variables) is added, the adjusted R^2 increased to 31.4% compared with Model 1 which means that the addition of independent variables of children's family factors in Model 2 strengthen

the explanation for the influence of the independent variables to the subjective well-being of children of migrant parents.

Testing statistical assumption for regression coefficients in the models reveals that some hypotheses of this research on the effects of variables are confirmed ($\beta \neq$ 0). However, the number of variables that can affect the statistical significance in each model is not the same in these models, specifically, three variables in Model 1 and five variables in Model 2. We believe that children's self-assessment of their school performance and success in life is the key factor affecting their subjective well-

being. Besides, other factors including the frequency of communication between children and their parents while they work away from home and children's self-esteem also have a proportional influence to subjective well-being of themselves.

DISCUSSION

This study aims to examine the impacts of parental migration to their children. Various studies were conducted and published on this topic (Zhao, Yu, Wang, & Glauben, 2014; Fan, Su, & Gill, 2010). Results of these studies showed that children of migrant parents experienced emotional, behavioral, and learning difficulties. They also showed lower level of subjective well-being than that of children who lived with their parents. However, the factors that could mitigate negative impacts of parental migration on children have not been fully mentioned. Moreover, as indicated in the overview, most published studies were carried out with only caregivers, while our study conducted the survey with children.

Our findings are in line with conclusions of previous studies on the same topic. Subjective well-being of children whose parents work away from home is lower than that of children living with their parents. A recent study in China also indicated that children with both parents migrating for employment obtained the lowest score of subjective well-being in the three surveyed groups including children with one migrant parent (father or mother), children in non-migrant households and children with both parents working away from home (Su et al., 2012). Thus, the results of our study are relatively consistent with the findings of Su et al. (2012) despite of minor difference, in particular, children whose mothers work away from home have the lowest score of subjective well-being, compared to children with both migrant parents, and children of only migrant fathers.

Scores of subjective well-being of children with mothers migrating for employment are the lowest due to the fact that these children receive less care and love of mothers in their daily life. Characteristics of motherhood are love and warmth, while authority, control, and punishment are typical in father-and-son relationship when children have inappropriate behaviors (Collins & Russell, 1991). When both parents are working away, children lack mother's love, but are not controlled or suffered from punishment of the father, so children with both migrant parents obtain higher subjective well-being scores than those with only mother working away. The research also implies the important role of the mother in the psychological life of the children of migrant parents (Shen & Shen, 2014; Wen & Lin, 2012).

The research by Wang et al. (2014) based on a survey of 19 studies conducted in China, published in English in the period from 2006 to 2013 with a total of 13,487 children (aged 6 to 15 years) including 7,758 children left behind in rural China and a control group of 5,729 children indicated that left-behind children felt less happy than the group of children living with their parents; the group of girls and younger

children are less happy than the group of boys and older children (Wang et al., 2014). As compared with Wang's research, our results have similarities to affirm that children whose parents work away from home show lower subjective well-being than those living with their parents. However, in our research, the scores of subjective well-being are not different between boys and girls; this has also been demonstrated in a study by Proctor, Linley and Maltby (2008). In terms of age, in our study, children aged 9 to 11 years achieved higher scores of subjective well-being than those aged 12 to 15 years. The similar results have been also noted in some other studies, subjective well-being declines with age (Bradshaw, Keung, Rees, & Goswami, 2011; Klock, Clair, & Bradshaw, 2014).

Comparing our results with the findings of some other authors, both similarities and differences are found. This research reveals that children with migrant parents achieve lower scores of subjective well-being than those living with their parents (except social well-being), while Graham and his colleagues in their research indicated that there are no differences in statistical significance between the two groups of children. Another difference between our research with Graham's is that Graham evaluated the well-being of children through the judgment of caregivers (Graham & Jordan, 2011) while our approach is to directly ask the children.

To understand which elements can mitigate negative consequences of parental migration to subjective well-being of children, we used a multiple regression model to examine factors within the children themselves and those within their families. The study found that the children's satisfaction in learning outcomes, their satisfaction in life, the length of parental migration, and the frequency of communication between children and their parents (Table 5) were the most influential factors that increased the children's subjective well-being. This finding is consistent with Vietnamese culture and the influence of science and technology on nowadays communication. In Vietnam, a child is considered a good student if he or she has good academic performance at school. Therefore, when the child achieves good academic achievement, he or she feels pleased and happy. In addition, when his or her parents work far away from home, physical conditions (housing, furniture, daily activities) are improved (Nguyen, 2015), making the child feel happier. Thanks to the social networking sites and the internet universalization to every household, the communication of children with their migrant parents is significantly improved, eliminating the feeling of separation between parents and their child. If parents working far from home spend more time calling and/or talking online with their children, the children's feeling of separation decrease and subjective well-being increase.

The strength of this study is to gather data from the child itself through questionnaires of MHC-SF. However, no comparisons and reconciliation was done between the children's subjective well-being

with the evaluation of their fathers/mothers (in case of children with one migrant parent) or caregivers (for children with both father and mother working away from home).

Results from this study confirmed the findings of previous studies on the impact of migrant parents to "left-behind children" in different cultures, such as China or ASEAN countries are correct. It is undoubted that children of migrant parents express lower subjective well-being than those of non-migrant parents; the children of migrant mothers have lower scores than those with fathers working away from home and the interactions as well as communication between children with migrant parents are important factors that have considerable impact on children's subjective well-being.

CONCLUSION

In conclusion, psychological problems in general, and in particular subjective well-being of children with migrant parents have not been widely studied in Vietnam. Key findings from this study indicate that (i) the subjective well-being in children whose parents migrate for employment is lower than that in the group of children living with their parents; (ii) children with mothers working away from home have lower subjective well-being than those with migrant fathers; and (iii) the children's self-assessment of their success in learning and in life, and the frequency of communication between the children and their parents significantly affect the children's subjective well-being.

REFERENCES

ACTIONAID. (2012). *Female and Internal Migration: An Arduous Journey for Opportunities*: Luck House Graphics. Retrieved January 3, 2017, from http://www.actionaid.org/vietnam/publications/female-and-internal-migration-arduous-journey-opportunities

Binh, V. N. (2012). Legal issues, policies and practices of women going overseas labour from the perspective of rights and gender. In N. T. H. Xoan (Ed.), *Gender and migration: Asia vision* (pp. 71–100). Hochiminh City: Vietnam National University.

Bradshaw, J., Keung, A., Rees, G., & Goswami, H. (2011). Children's subjective well-being: International comparative perspectives. *Children and Youth Services Review, 33*(4), 548–556. doi:10.1016/j.childyouth.2010.05.010

Collins, W. A., & Russell, G. (1991). Mother-child and father-child relationships in middle childhood and adolescence: A developmental analysis. *Developmental Review, 11*(2), 99–136. doi:10.1016/0273-2297(91)90004-8.

Fan, F., Su, L., Gill, M., & Birmaher, B. (2010). Emotional and behavior problems of Chinese left-behind children: a preliminary study. *Social Psychiatry and Psychiatry Epidenmiology, 45*(6), 655–664. doi:10.1007/s00127-009-0107-4

General Statistics Office. (2016). *Report on labour force survey 2015*. Hanoi, Vietnam: Author.

Graham, E., & Jordan, L. P. (2011). Migrant parents and the psychological well-being of left-behind children in Southeast Asia. *Journal of Marriage and Family, 73*(4), 763–787. doi:10.1111/j.1741-3737.2011.00844.x

Ha, T. T. K. (2015a). Adapting adolescent subjective well-being scale. *Journal of Psychology, 5*(194), 52–63.

Ha, T. T. K. (2015b). Subjective well-being among the grown-up. *Journal of Psychology, 11*(200), 34–48.

Hu, H., Lu, S., & Huang, C.(2014). The psychological and Behavior outcomes of migrant and left-behind children in China Rutgers. *School of Social Work , 6*, 1–19. Research Report.

Jia, Z., & Shi, L., Cao, Y., Delancey, J., & Tian, W. (2010). Health- related qualiy of life of "left-behind children": A cross-sectional survey in rural China. *Quality of Life Research, 19*, 775–780. doi:10.1007/s11136-010-9638-0

Jia, Z., & Tian, W. (2010). Loneliness of Left-behind children: A cross-sectional survey in a sample of rural China. *Child: Care, Health and Development, 36*(6), 812–817.

Jingzhong, Y., & Lu, P. (2011). Differentiated childhoods: Impacts of rural labour migration on left-behind children in China. *The Journal of Peasant Studies, 38*(2), 355–377. doi:10.1080/03066150.2011.559012

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly, 61*, 121–140.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*, 207–222.

Kham, T. V., & Quyet, P. V. (2015a). Access to social services: How poor migrants experience their life in contemporary Vietnamese urban areas. *Journal of Social Sciences and Humanities, 1*(3), 277–290.

Kham, T. V., & Quyet, P. V. (2015b). Social inclusion of the poor migrant in the contemporary Vietnamese Urban life. *Social Science, 4*(6), 127–133. doi:10.11648/j.ss.20150406.11

Klock, A., Clair, A., & Bradshaw, J. (2014). International variation in child subjective well-being. *Child Indicators Research, 7*(1), 1–20. doi:10.1007/s12187-013-9213-7

Lu, W. (2011). *Left-Behind Children in Rural China: Research Based on the Use of Qualitative Methods in Inner Mongolia.* Department of Social Policy and Social Work, University of York.

Luo, J., Gao, W., & Zhang, J. (2011) The influence of school relationship on anxiety and depression among chinese adolescents whose parents are absent. *Social Behavior and Personality, 39*, 289–298. doi:10.2224/sbp.2011.39.3.289

Nguyen, C. V. (2015). Does parental migration really benefit left-behind children? Comparative evidence from Ethiopia, India, Peru and Vietnam. *Social Science & Medicine, 153*(2016), 230–239. doi:10.1016/j.socscimed.2016.02.021

Piper, N. (2012). Gender and migration in ASEAN. In N. T. H. Xoan (Ed.), *Gender and migration: Asia vision* (pp. 32–51). Hochiminh city: Vietnam National University.

Proctor, C. L., Linley, P. A., & Maltby, J. (2008). Youth life satisfaction: A review of the literature. *Journal of Happiness Studies, 10*(5), 583–630. doi:10.1007/s10902-008-9110-9

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*(4), 719–727.

Shen, G. C., & Shen, S. J. (2014). Study on the psychological problems of left-behind children in rural areas and countermeasures. *Studies in Sociology of Science, 5*(4), 59–63.

Su, S., Li, X., Lin, D., Xu, X., & Zhu, M. (2012). Psychological adjustment among left-behind children in rural China: The role of parental migration and parent–child communication. *Child: Care, Health and Development, 39*(2), 162–170.

Thinh, H. B. (2012). Research on gender and migration in Vietnam: An analysis overview. In N. T. H. Xoan (Ed.), *Gender and migration: Asia*

vision (pp. 12–31). Vietnam, Hochiminh City: Vietnam National University.

Wang, X., Ling, L., Su, H., Cheng, J., Jin, L., & Sun, Y-H. (2014). Self-concept of left-behind children in China: A systematic review of the literature. *Child: Care, Health and Development, 41*(3), 346–355.

Wen, M., & Lin, D. (2012). Child development in rural China: children left behind by their migrant parents and chilren of nonmigrant families. *Child Development, 83*(1), 120–136.

Xiaojun, S. (2015). Psychological development and educational problems of left-behind children in rural China. *School Psychology International, 36*(3), 227–252.

Zhao, Q., Yu, X., Wang, X., & Glauben, T. (2014). The impact of parent migration on children's school performance in rural China. *China Economic Review, 31*, 43–54.

SOCIAL SCIENCES & HUMANITIES

Building Students' Character in Elementary School through the Scientific Method: A Case Study of the Lampung Province

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ABSTRACT

The scientific method is a popular mechanism through which science teachers can impact students' cognitive domains and academic nature. The purpose of this study is to analyze the implementation of the scientific method of teaching social science subjects and educational character in the affective domain. To do so, we engaged in research using quasi-experimental methods. A random sample of 40 students was chosen. Data were collected using a questionnaire on students' character consisting of three aspects: reasoning, feeling, and behavior. The data have a normal distribution with a significant value of 0.966 and are homogeneous with a significant value of $0.100 > 0.05$. The data were analyzed using a paired sample *T*-test. The character value of social studies learners, after being taught using the scientific method, was higher than ever with a significance of $0.000 < 0.05$. The character of students in the affective domain was influenced by the feelings aspect resulting from the scientific method. Thus, using the scientific method in educational interventions improved the character of fifth-grade elementary school students.

Keywords: Affective domain, elementary school, character education, scientific method

INTRODUCTION

In recent years, the issue of character development has become a prevalent one faced by all institutions (Schreuder, 2011) such that schools and colleges have sought to develop curricula to enhance students' character. Formal educational institutions are one category of organizations that

have pursued this goal (Anwar, 2016), as schools have the role, resources, and cultural capital of the powerful to shape students' experiences (Chang & Chou, 2015; Lareau, 1987; Lickona, 1996). Activities in the classroom affect and change students (Tinto, 1987); thus, it is necessary to integrate the values of society into their formal education (Owour, 2008). It is difficult, however, for schools to create programs that lead to character education and to measure the success of these programs (Schaps et al., 2001).

Learning in schools should not only be oriented to domain-oriented (cognitive) academic activities, but also to the affective domain of social, emotional, and ethical competence. This can be done by scientific method, where scientific method has been used only by teachers in the field of natural science. The scientific method is built on the understanding of the theories of the constructivist Piaget (1968), as well as Ausubel (1968)'s theory of meaningful learning. Bruner (Carin & Sund, 1975) posited that people only learn and develop the mind through discoveries that will strengthen memory retention. Vygotsky (1990), a social constructivist, believed that cognitive learners will be developed at the moment when the teacher provides scaffolding through interaction with peers. Scientific methods are applied in class and group so that students can build knowledge and develop their character.

Value education scaffolds social and emotional learning, develops peer group friendships, and promotes a sense of "togetherness" as the basis for the classroom community (Oers & Hannikainen, 2001). According to Woolfolk (2004), cognitive development was influenced by maturity, activity, and social transmission. With the activities that form the scientific method, cognitive and character learners will develop in tandem. Through the method, where students work together to conduct research, as well as through discussion, the teacher can create a moral community. Such a community is characterized as one where students respect and care for one another such that mutual respect exists within the group, and where a democratic environment exists in the classroom such that students are involved in decision making. Teachers train the students on a moral discipline, using the creation and application of the rules as an opportunity to promote moral reasoning, self-control, and respect for others, as well as to teach values through the curriculum using academic subjects (Cheung & Lee, 2010).

Character education involves values education or religious education, which must teach the scientific method (Kirschenbaum, 2000). Character education has the educational value of helping students to develop dispositions to act in ways that definitely. The role of schools that stand out with regard to the formation of character can be characterized as follows:

> *"to build on and supplement the values children have already begun to develop by offering further exposure to a range of values that are current in society (such as*

equal opportunities and respect for diversity); and to help children to reflect on, make sense of and apply their own developing values' (Halstead & Taylor, 2000, p. 169).

Halstead and Taylor (2000) found that character values were taught and presented in learning Citizenship, Personal, Social, and Health Education (PSHE), and other subjects such as History, English, Math, Science and Geography, Design and Technology, as well as Physical Education and Sport. According to Lickona (1991), and Ryan and Bohlin (1999), character education includes moral reasoning (or the ability to know when something is good), moral feelings, love, kindness, as well as moral behavior (or doing something good). Gleeson and Flaherty (2016) stated that the role of the teacher consists of being a moral educator, role model, and holistic educator. The responsibility of schools is, thus, to provide a moral education on behalf of the state. Lickona (1991) showed that character education was developed to train students to be able to decide what is right or wrong, and to act in accordance with their beliefs.

Character is a collection of qualities, or a mark that distinguishes itself from others (Homiak, 2007). The character of an individual determines whether they understand love and kindness, and whether they do well (Ryan & Bohlin, 1999). Character education is not only limited to courage, integrity, decency, kindness, perseverance, responsibility, tolerance, discipline, respect, and responsibility, but

also denotes how a person responds to desires, fears, challenges, opportunities, failure, and success (Cheung & Lee, 2010). Character education helps students to understand right from wrong and to know how to control themselves and consistently do what is right (Josephson, 2002). According to Lickona (1991), character education addresses three aspects: knowledge (cognitive), feelings, and action. This study examined the scientific method and character education and focused on three aspects, namely reasoning, feeling, and behaviors.

For these reasons, it is necessary to study whether the scientific method influences the character of elementary school students of Social Science in the Lampung province of Indonesia. Elementary schools are the most basic institutions for shaping the character of future citizens.

LITERATURE REVIEW

Learning in schools should be oriented to academic activities that tend to not only cognitive domains, but also the affective domain. These activities should target social competence, emotions, and ethics, because doing so will contribute to students' quality of life (Cheung & Lee, 2010; Cohen, 2006). This can be done by means of the scientific method, although the scientific method has generally been used only by science teachers. Learning by the scientific method involves students conducting observations, proposing a hypothesis, and testing that hypothesis by means of experimentation (Raven et al., 2008). The scientific method refers to a set

of assumptions, attitudes, and procedures used to investigate, pose questions, and draw conclusions (Hockenbury & Hockenbury, 2000; Mc Murry & Fay, 2008). The scientific method is a method of collecting data that relies on the assumption that knowledge is built from observation and that knowledge is a truth (Ferrante, 2008). Students using the method will make observations, ask questions, formulate hypotheses, search for the evidence to test hypotheses, and develop theories (Keyes, 2010; Wicander & Monroe, 2006). The scientific method will familiarize the students for scientific and critical thinking that begins with observation activities, proposing hypotheses, and experimenting.

Character education includes three aspects of knowledge (cognitive), feeling, and action. This is in accordance with Park's opinion (2017), that cognitive ability positively supports tripartite character, that is, interpersonal, intrapersonal, and intellectual personality. Zarinpoush's (2000); Blanchette (2010), and Smith (2017) research shows that reasoning and mood affect a person's moral behavior and enrich the understanding of moral education. Students with good behavior exhibit more moral and emotional sensitivity than children who engage in bad behavior. Furthermore, the empathy component is stronger in encouraging prosocial behavior and inhibiting antisocial measures than the cognitive component (Lonigro, 2014).

The moral dilemma raises judgment and affects reasoning, which in turn affects the process of moral judgment, requiring the empathy of teachers, and teachers to package the values of character education so as to accelerate the change of students' knowledge of the value (Barger, 2013; Beachum, 2013; Senland, 2013; Walker 2015).

Moral learning will shape the character of the child. The level of reasoning in view of the moral object will affect the feelings, goals, and actions. Teachers should remember this wisely, because knowledge of morals will affect the moral response that is awakened to the child. Moral learning should be interesting, so it will affect the habits and willingness to behave well (Nucci, 2014).

Kohlberg's theory of moral development explores the role of cognition and emotion, although the focus is cognition. Contemporary post-formal theory leads to the conclusion that skills resulting from cognitive affective integration facilitate consistency between moral judgment and moral behavior. The development model of the four moral components for development describes these skills in particular. Components, moral motivation, moral sensitivity, moral reasoning and moral character, operate as a multidimensional process that facilitates moral development and then encourages moral behavior (Morton, 2006).

METHODS

The research used was quasi-experimental in nature to evaluate the causal relationship between the scientific method with the character of elementary school students in

Lampung Province and assess what factors are dominant in the characters formation. This method reveals the causal relationship that is not determinative but is only a probability of increasing the probability of effect (Cook & Campbell, 1979; Shadish, 1995; Shadish et al., 2002).

This research methodology is used to answer the research question whether there is influence between the scientific method with the character of elementary school students in Lampung Province? And what factors are dominant in the formation of these characters?

The sample was determined by random sampling, which involved sampling the population with a random member of the population regardless of strata. Samples were obtained directly from the sampling unit; thus, each unit had the same opportunity to be sampled (Roscoe, 1975). The number of samples was determined by Stephen Isaac and William B. Michael (Isaac, 1981) with an error rate of 5%. The sample size was 40 students (22 girls and 18 boys) in fifth-grade elementary school with an average age of 12 years. The research was conducted during a single week.

Data on the character of the students were collected by means of questionnaires consisting of three aspects (Lickona, 1991) in which the statements were developed by the author: reasoning (9 statements, numbered as items 1 through 9), feelings (6 statements, numbered as items 10 to 15), and behavior (15 statements, numbered as items 16 to 30), as shown in Table 1.

Table 2 shows the value of the reliability of the questionnaires according to the aspect of students' character, in which reasoning was obtained with a Cronbach's Alpha value of 0.89, feelings with a Cronbach's Alpha value of 0.81, and behavior with a Cronbach's Alpha value of 0.93. Based on the reliability testing, all aspects have a Cronbach's Alpha value of 0.967, so that all items contained in the questionnaire were reliable and consistent throughout the test because the reliability was strong (Bonett & Wright, 2015; Maier et al., 2016; Sebastian, 2004).

Table 1
Aspects of the character questionnaire and the number of statement items

Aspect of Measurement	Number of Items
Reasoning	9 items
Feeling	6 items
Behavior	15 items
Total	30 items

Table 2
Reliability of the character aspects

Aspect of Measurement	Cronbach's Alpha Value
Reasoning	0.89
Feelings	0.81
Behavior	0.93
Total	0.967

Table 3 shows that all of the data were tested using a one-sample Kolmogorov-Smirnov score (Yu et al., 2006), which had a normal distribution. The Kolmogorov-Smirnov score for the reasoning aspect was

0.231 with a significant value of 0.200; the feelings aspect was 0.238 with a significant value of 0.200; and the behavioral aspect was 0.308 with a significant value of 0.077. This indicated that the samples were normally distributed.

Table 3
Results of the data normality test

Aspect of Measurement	Kolmogorov-Smirnov Score	Significant Value
Reasoning	0.231	0.200
Feelings	0.238	0.200
Behavior	0.308	0.077

Based on the homogeneity test using one-way ANOVA (Ary et al., 2010), the significant value was $0.100 > 0.05$, which indicated that the sample was homogeneous. The data were analyzed using a paired sample *T*-test as the design (Ary et al., 2010). A step-by-step analysis of the data is shown in Table 4.

Table 4
Steps of the data analysis

Steps	Purpose	Analysis
1	Reliability assessment	Cronbach's alpha test
2	Relationships among variables	Correlation analysis
3	Differential tests before and after treatment	Paired sample t-test

RESULTS

Mean and Standard Deviation

The average and standard deviation of the three aspects of character were compared. Table 5 shows that the highest average was the reasoning aspect (2.556± 0.527), followed by feelings with an average of 2.17 ± 0.408, and behavior with an average of 2.00 ± 0.378. Of the three categories, the lowest was the behavioral aspect and the highest was the reasoning aspect.

Table 5
Mean and standard deviation (SD)

Character	Mean	SD
Reasoning	2.556	0.527
Feelings	2.17	0.408
Behavior	2.00	0.378

Inter-Correlation among the Aspects of Character

Three aspects of the character of students were analyzed by the correlation analysis. Table 6 shows how the character aspect was correlated with all other aspects. The results presented in Table 6 show that the reasoning aspect was significantly correlated with the behavioral aspect. Its correlation coefficient was 0.683 ($r = 0.683$) and its significant value was 0.043 ($p < 0.005$). The feelings aspect was significantly correlated with the behavioral aspect with $r = 0.977$ and $p = 0.001$ ($p < 0.005$). The aspects of character in this study were reasoning, feelings, and behavior. Correlation analysis between these two aspects cannot describe the correlation that is closest among the three, and thus further correlation analysis is required.

Table 6
Inter-correlation among the aspects of character

	Reasoning		Feeling		Behavior	
	R	Sig	*R*	Sig	*R*	Sig
Reasoning			0.720	0.107	0.683	0.043
Feeling	0.720	0.107			0.977	0.001
Behavior	0.683	0.043	0.977	0.001		

Regression Analysis of Variables

A regression analysis was performed to determine whether character can be predicted by reasoning and feelings, as well as to identify whether character is better predicted by either the reasoning or feelings variable. Regression was performed to determine the extent of the contribution of reasoning or feelings to character. Variables reasoning and feelings were used as independent variables for character. Tables 7 and 8 show that reasoning was a significant contributor to behavior to a significant degree, with values of 0.001 for less than 0.05. Given this significance, reasoning can be said to influence behavior. A significant contribution was made to behavior by the reasoning variable with a value of 0.786 or 78.6%, of which 21.4% of the behavior was influenced by other factors. The contribution made by the feelings variable towards behavior was 0.972, or 97.2%, of which 2.8% of the behavior was influenced by other factors.

Table 7
The constant of the reasoning and feelings aspects

Model	Unstandardized coefficient		Standardized coefficient	*T*	Sig.
	B	Std. error	Beta		
1 (Constant)	−5.308	15.249	0.887	−0.348	0.738
Reasoning	0.879	0.173		5.078	0.001
1 (Constant)	118.180	3.840	-0.986	30.775	0.000
Feeling	−0.540	0.046		−11.784	0.000

Knowing that the constant value of the reasoning aspect was −5.308 and that the reasoning aspect value was 0.879, we could thus obtain the regression equation of $y = -5.308 + 0.879x$. That is, when students obtained a score of 21.4 in reasoning, it could be predicted that the behavior score was $y = -5.308 + (0.879 \times 22) = -5.308 + 19.338 = 14.03$. While the constant of the feelings aspect was 118.180, the value of the feelings aspect was −0.540, giving us the following regression equation: $y = 118.180 + (-0.540x)$. That is, when the feelings of students obtained a score of 97.2, it could be predicted that the behavior score was $y = 118.180 + (-0.540 \times 97.2) = 118.180 + (-52.488) = 65.692$.

Table 8
The contribution of reasoning and feelings to behavior

Model	R	R^2	Adjusted R^2	Std. error of the estimate
1 Reasoning	0.887	0.786	0.756	2.531
1 Feeling	0.986	0.972	0.965	0.529

The data in Table 9 describe how the variables contribute to the reasoning and feelings of character. The results of the analysis showed that these two variables were significant predictors of character. The most obvious contributions of variants were from feelings ($\beta = 0.986$, $p < 0.01$), followed by reasoning ($\beta = 0.887$, $p < 0.01$). It can be said that the feelings aspect contributed as a potential variable to the formation of character.

Table 9
Regression analysis of the reasoning and feelings variables

Variable	B	Std. error B	Beta (β)
Reasoning	0.879	0.172	0.887
Feeling	−0.540	0.046	−0.986

As discussed earlier, feelings and reasoning were significantly correlated with character ($r = 0.977$, $p < 0.01$ and $r = 0.683$, $p < 0.01$). To find out which of the two independent variables acted as a predictor of character, a multiple regression analysis with a stepwise approach was performed. As shown in Table 8, with two independent variables included in the equation, only the feelings variable was statistically significant in predicting character. Analysis showed that the feelings aspect was predicted as the best contributor to character ($\beta = 0.972$, $p < 0.01$). It was found that the same aspect accounted for 98% of the feelings aspect of reasoning. In particular, the variable aspect of feelings contributed 98% of character, and reasoning was not a significantly predictive aspect of character. The use of the feelings aspect was a very strong predictor of character. Reasoning can be understood as being directly related to character and not as a factor that has a direct effect on character. Aspects of the feelings of students predict their character and in turn, the feelings aspect of students is predicted to help build character.

Differences Pre- and Post-Test of the Character Values of Students

Table 10 shows the results of the descriptive statistical analysis. The table shows that the average pretest value was 47.62 ± 0.886 with a standard error of 0.886 and an average posttest value of 66.70 ± 0.868 with a standard error of 0.868.

Table 10
Paired samples statistics

	Mean	*N*	SD	Std. Error Mean
Pair 1 Pretest	47.62	40	5.601	0.886
Posttest	66.70	40	5.492	0.868

Table 11 shows the results of the correlation analysis between the pre- and posttest values. The correlation coefficient was 0.349 with a significance value of 0.27. This suggests that both sets of data were not correlated.

Table 11
Paired samples correlation

	N	Correlation	Sig.
Pair 1 Pretest and Posttest	40	0.349	0.027

Table 12 shows the results of the average difference between the pre- and posttest values. The results show that the *T* value was −19.058 with a significant value (two-tailed) of 0.000. This explains why there was a difference between the pre- and posttest values, and therefore the value of T was found to be negative, indicating that the posttest value was better than the pretest value. Thus, there were differences in the character education of students before and after learning with the scientific method. The fifth-grade elementary students in the social sciences who learned according to the scientific methods had better character education than before.

Table 12
Paired samples test

	Paired Differences					*T*	df	Sig. (two-tailed)
				95% Confidence Interval of the Difference				
	Mean	STD	Std. Error Mean	Lower	Upper			
Pair 1 Pretest and Posttest	−9.075	6.330	1.001	−21.099	−17.051	−19.058	39	0.000

DISCUSSION

Based on the analysis, it appears that the value of the character of students in social science subjects is higher after learning with the scientific method than before the use of the scientific method. Thus, the scientific method proved capable of forming students' character in social science subjects, although the social sciences material tends to exist on a cognitive

process dimension involving memory and understanding, and exists in the factual and conceptual knowledge dimension (Anderson & Krathwohl, 2001). The scientific method can improve character because learners are accustomed to observing and searching for a problem or symptom, and teaching is not enough, on its own, for explaining the material (Bernard, 1995). With the scientific method, students experience the process of diffusion and socialization, and will have a broader perspective of the area of science being taught to them. The application of scientific method in learning is conducted in groups and classical so that the process of socialization between students that can form the character and strengthen the knowledge.

Viewing is the process of overcoming conceptual misperception. Observation is the basis of scientific thinking, because learning is not "literal" or "mechanical." The results of student learning do not come from a textbook, but from the opinions of experts and other authorities. With the complexity of the scientific method, the material will be analyzed according to each variable. If the scientific method is used consistently, students will be taught to think critically and become powerful thinkers of the fields that they are studying (Keyes, 2010). The scientific method provides an opportunity for students to apply and develop an understanding of scientific ways of thinking and develop their character accordingly. Classes are formed in groups of four to six students to solve problems starting from observation, data collection, experimenting, and experimental presentation.

There are three aspects involved in the formation of character: reasoning, feelings, and behavior (Lickona, 1991). Table 4 shows that the feelings aspect is more dominant in forming behavior than the reasoning aspect that follows. The data also show that the relationship to feelings is higher than that to reasoning. The relationship between feelings and reasoning will affect students' character. The data also show that students' character is related to feelings and reasoning. Apparently, agreeing and disagreeing with students with regard to the object of character, and deciding to do things to make others happy, given that behavior depends on the situation, will make students interested in behaving better. This study indicated that students' character is formed by the feelings that teachers instill in them using the scientific method. Through the scientific method, students will be conditioned to handle the feelings that are often referred to as emotional intelligence. The steps of the scientific method are to train and organize emotions, because emotions are reactions to an object, rather than reactions to character or great feelings toward someone or something (Robbins & Judge, 2013).

An intelligence and emotional maturity will determine how well a person can use their skills and determine their attitude and behavior (Cooper & Ayman, 1998; Goleman, 1995). The ability to perceive, understand, and apply emotional sensitivity selectively as an energy source needs to be learned by students using the right method, which is powered by Mahasmeh

(2016)'s research. Thus, students will learn to recognize and appreciate their sense of self, to respond appropriately, and to implement this sense of self effectively in everyday life. Emotional intelligence refers to the range of skills, capabilities, and non-cognitive competencies that predispose a person to successfully meet the demands and environmental pressures of life (Robbins & Judge, 2013). Students who have a positive mood will be used to interacting socially, and will contribute to the good mood of others around them (Isen, 2003); thus, behavior will always be in character. Dimensional feeling has a role in the formation of character, so that all contents should be able to be interpreted in accordance with that feeling, because the purpose of education is reasoning and character development (Barak & Shakhman, 2008). To achieve these objectives, the students must be taught and empowered naturally. This is according to the research of Nunez (2015).

The findings of this study support Lawson (2009)'s finding that acquiring knowledge and skills with the scientific approach will accelerate the acquisition of yield, quality, and retention. Students who participate actively in class and learn the scientific method of finding the truth will understand the process of education, because students engage in dialogue with one another and play a role in their own education (Sanderse, 2013), and because learning is not only an individual endeavor (Chen, 2013). Modern society requires an efficient learning method. The scientific method will help learners to reason, solve problems, and conduct research based on empirical data rather than from the results of scientific findings (Hodson, 1986). Learning the scientific method would encourage moral reflection and teach students about conflict resolution, thus helping students to learn how to solve problems and encourage moral reasoning, self-control, and respect for others. The integration of character education is an important part of the success of academic activities. Character education will be effective if implemented with full commitment and scientific basis. Character education cannot be built in a purely academic way and does not occur instantly, but through habituation and conditioning it could be implemented continuously (Kristjánsson, 2014; Komalasari & Saripudin, 2015; Woolfolk, 2004).

Habituation can be achieved by following the work of a scientist and using the scientific method between friends and individuals, which will estimate students to respect one another, as well as be patient and honest in describing the results obtained. A method of character education using approaches and methods of indoctrination that are not reflectively and empirically integrated with the system and culture of the school is unlikely to succeed (Al Hamdani, 2016). Likewise, character education for children of primary school age is not possible because primary-school children are sensitive to the cultivation of character education at that age (Peterson, 2015).

CONCLUSION

The scientific method as a method of intervention to improve the character education of elementary school students is more directed to the affective domain in the field of social sciences. The scientific method, however, is not only used by natural science teachers that prefer the cognitive domain. Students' character is built from the aspects of feelings, behavior, and reasoning. Therefore, it is necessary to design and reformulate the syntax of the scientific method as an important variable in character education. Further research is also needed, especially to create a questionnaire to measure students' character that is more standardized and includes more comprehensive measures of character.

The discussion of the issues examined in this study is not yet complete because the relationships between the character-forming aspects can be measured separately as possible independent variables. The causal relationship of two variables requires further research in order to identify which of the variables change as a result of the relationship.

The empirical data of this study could not establish whether students' character generated by the scientific method changed over time. This study also did not prove how the three aspects of character formation significantly relate to character. The relationship between these three aspects as described in this study has been identified to explain how the aspects of character can produce a significant change in character.

REFERENCES

Al Hamdani, D. (2016). The character education in Islamic education viewpoint. *Journal Pendidikan Islam*, *1*(1), 98–109.

Anderson, C. A. (2004). An update on the effects of playing violent video games. *Journal of Adolescence, 27*(1), 113–122.

Anderson, L. W., Krathwohl D. R., & Bloom B. B. (2001). *Taxonomy learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York, NY: Longman.

Anita, W. (2004). *Educational psychology* (9th ed.). Boston, MA: Pearson.

Anwar, C. (2016). Character education insightful nationality: A multicultural approach. *Mediterranean Journal of Social Sciences, 7*(2), 182–187.

Ary, D., Jacobs, L. C., & Sorensen, C. (2010). *Introduction to research in education* (8th ed.). Canada: Nelson Education Ltd.

Ausubel, P. D. (1968). *Educational psychology*: *A cognitive view*, New York, NY: Holt, Rinehart and Winston.

Barak, M., & Shakhman, L. (2008). Reform-based science teaching: Teachers' instructional practices and conceptions. *Eurasia Journal of Mathematics, Science & Technology Education, 4*(1), 11–20.

Barger, B., & Derryberry, W. P. (2013). Do negative mood states impact moral reasoning? *Journal of Moral Education*, *42*, 443–459.

Beachum, F., McCray, C., Yawn, C., & Obiakor, F. (2013). Support and importance of character education: Pre-service teacher perceptions. *Education*, *133*(4), 470–480.

Bernard, R. B. (1995). *Research methods in anthropology: Qualitative and quantitative approaches* (2nd ed.). Walnut Creek, CA: Altamira Press.

Blanchette, I., & Richards, A. (2010). The influence of effect on higher level cognition: A review of research on interpretation, judgement, decision making and reasoning. *Cognition and Emotion, 24*(4), 561–595.

Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior, 36*(1), 3–15.

Carin, A. A., & Sund, R. B. (1975). *Teaching science through discovery* (3rd ed.). Columbus, OH: Merrill Publishing Company.

Chang, C. M., & Chou, C. (2015). An exploratory study of young students' core virtues of e-character education: The Taiwanese teachers' perspective. *Journal of Moral Education, 44*(4), 516–530.

Chen, Y. L. (2013). A missing piece of the contemporary character education puzzle: The individualisation of moral character. *Studies in Philosophy and Education, 32*(4), 345–360.

Cheung, C. K., & Lee, T. Y. (2010). Improving social competence through character education. *Evaluation and Program Planning, 33*(3), 255–263.

Cohen, J. (2006). Social, emotional, ethical, and academic education: Creating a climate for learning, participation in democracy, and well-being. *Harvard Educational Review, 76*(2), 201–237.

Cook, D. T., & Campbell, D. T. (1979). *Quasi experimentation: Design and analysis for field settings*. Boston, MA: Houghton Mifflin Company.

Cooper, R. K., & Ayman S. (1997). *Excecutive IQ: Emotional intelligence in leadership and organization*. New York, NY: Grosset-Puttnam.

Ferrante, J. (2008). *Sociology: A global perspective* (7th ed.). Belmont, CA: Thomson-Wadsworth.

Gleeson, J., & Flaherty, J. O. (2016). The teacher as moral educator: Comparative study of secondary teachers in Catholic schools in Australia and Ireland. *Teaching and Teacher Education, 55*, 45–56.

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York, NY: Bantam Books.

Halstead, J. M., & Taylor, M. J. (2000). Learning and teaching about values: A review of recent research. *Cambridge Journal of Education, 30*(2), 169–202.

Hockenbury, D. H., & Hockenbury, S. E. (2000). *Psychology* (2nd ed.). New York, NY: Worth Publishers.

Hodson, D., (1986) Laboratory work as scientific method. *Journal of Curriculum Studies, 28*, 115–135.

Isaac, S., & Michael, W. B. (1981). *Handbook in research and evaluation for education sciences* (2nd ed.). San Diego, CA: EdITS Publishers.

Isen, A. M. (2003). *Positive affect as a source of human strength: The psychology of human strength*. Washington, DC: American Psychological Association.

Josephson, M. (2002). *Making ethical decisions*. Los Angeles, CA: Josephson Institute of Ethics.

Keyes, G. (2010). Effective teaching: Teaching the scientific method in the social sciences. *The Journal of Effective Teaching, 10*(2), 18−28.

Kirschenbaum, H. (2000). From values clarification to character education: A personal journey. *The Journal of Humanistic Counselling, Education and Development, 39*(1), 4–20.

Komalasari, K., & Saripudin, D. (2015). Integration of anti-corruption education in school's activities. *American Journal of Applied Sciences, 12*(6), 445–451.

Kristjánsson, K. (2014). Phronesis and moral education: Treading beyond the truisms. *Theory and Research in Education, 12*, 151–171.

Lareau, A. (1987). Social class differences in family-school relationships: The importance of cultural capital. *Sociology of Education, 60*(2), 73–85.

Lawson, E. A. (2010). Basic inferences of scientific reasoning, argumentation, and discovery. *Science Education, 94*(2), 336–364.

Lickona, T. (1991). *Educating for character: How our schools can teach respect and responsibility*. New York, NY: Bantam Books.

Lickona, T. (1996). Eleven principles of effective character education. *Journal of Moral Education, 25*(1), 93–100.

Lonigro, A., Laghi, F., Baiocco, R., & Baumgartner, E. (2014). Mind reading skills and empathy: Evidence for nice and nasty ToM behaviours in school-aged children. *Journal of Child and Family Studies*, *23*(3), 581–590.

Mahasmeh, A. M. (2016). Emotional intelligence as a predictor of teacher sense of self-efficacy among student teachers in Jordan. *North American Journal of Psychology, 18*(1), 165–176.

Maier, U., Wolf, N., & Randler, C. (2016). Effects of a computer-assisted formative assessment intervention based on multiple-tier diagnostic items and different feedback types. *Computers and Education, 95*, 85–98.

Mc Murry, J. E., & Fay, R. C. (2008). *Chemistry* (5th ed.). Upper Saddle River, NJ: Pearson/Prentice-Hall.

Morton, K. R., Worthley, J. S., Testerman, J. K., & Mahoney, M. L. (2006). Defining features of moral sensitivity and moral motivation: Pathways to moral reasoning in medical students. *Journal of Moral Education*, *35*(3), 387–406.

Nucci, L., Narvaez D., Krettenauer, T. (2014). *Handbook of moral and character education*. New York, NY: Routledge.

Nunez, M. T. S., Patti, J., & Holzer, A. (2015). Effectiveness of a leadership development program that incorporates social and emotional intelligence for aspiring school leaders. *Journal of Educational Issues, 1*(1), 65–84.

Oers, V. B., & Hannikainen, M. (2001). Some thoughts about togetherness: An introduction. *International Journal of Early Years Education, 9*(2), 101–108.

Owuor, J. A. (2007). Integrating African indigenous knowledge in Kenya's formal education system: The potential for sustainable development. *Journal of Contemporary Issues in Education, 2*(2), 21–37.

Park, D., Tsukayama, E., Goodwin, G. P., Patrick, S., & Duckworth, A. L. (2017). A tripartite taxonomy of character: Evidence for intrapersonal, interpersonal, and intellectual competencies in children. *Contemporary Educational Psychology*, *48*, 16–27.

Peterson, A., & Bentley, B. (2015). Exploring the connections between Philosophy for Children and character education: Some implications for moral education? *Journal of Philosophy in Schools, 2*(2), 48–70.

Piaget, J., Piercy, M. (1968). *Psychology of Intelligence*. Totowa, N.J. : Littlefield, Adams.

Raven, P. H., Losos, J. B., Mason, K. A., Singer, S. R., & Johnson, G. B. (2008). *Biology* (8th ed.). New York, NY: McGraw-Hill.

Robbins, S. P., & Judge T. A. (2013). *Organizational behavior* (15th ed.). Boston, MA: Pearson.

Roscoe, J. T. (1975). *Fundamental research statistics for the behavioral sciences* (2nd ed.). Fort Worth, TX: Holt Rinehart & Winston.

Ryan, K., & Bohlin K. E. (1999). *Building character in schools: Bringing moral instruction to life*. San Francisco, CA: Jossey-Bass.

Sanderse, W. (2013). The meaning of role modelling in moral and character education. *Journal of Moral Education, 42*(1), 28–42.

Schaps, E., Schaeffer, E. F., & McDonnell, S. N. (2001). What's right and wrong in character education today. *Education Week, 21*(2), 40–44.

Schreuder, O. (2011). *Non scholae sed vitae discimus: Character education, threats and opportunities*. International conference on character education. Yogyakarta State University.

Sebastian, R. (2004). *Dynamic strategic analysis: Demystifying simple success strategies*. Deutscsher Universitats-Verlag: De. Springer.

Senland, A. K., & Higgins-D'Alessandro, A. (2013). Moral reasoning and empathy in adolescents with autism spectrum disorder: Implications for moral education. *Journal of Moral Education*, *42*(2), 209–223.

Shadish, W. R. (1995). Philosophy of science and the quantitative-qualitative debates. *Evaluation and Program Planning, 18*(1), 63–75.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental design for generalized causal inference.* Boston, MA: Houghton Mifflin Company.

Smith, R. J. (2017). The Relationship between Adolescent Prosocial Moral Reasoning, Risk Taking, and Perceived Environment to Prosocial Behaviour (Doctoral dissertation). Fielding Graduate University, Santa Barbara, California.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education, 68*(6), 599–623.

Vygotsky,L. S. (1990). *Instructional implication and application of social historical psychology*. New York, NY: Cambridge.

Walker, D. I., Roberts, M. P., & Kristjánsson, K. (2015). Towards a new era of character education in theory and in practice. *Educational Review*, *67*(1), 79–96.

Wicander, R., & Monroe, J. S. (2006). *Essentials of geology* (5th ed.). Belmont: CA. Brooks Cole.

Yu, H., Zheng, D., Zhao, B. Y., & Zheng, W. (2006). Understanding user behavior in large scale video on demand systems. *Proceedings of the 1st ACM SIGOPS/EuroSys European Conference on Computer Systems*, Leuven, Belgium. Retrieved on January 20, 2017, from https://www.cs.ucsb.edu/~ravenben/publications/pdf/vod-eurosys06.pdf

Zarinpoush, F., Cooper, M., & Moylan, S. (2000). The effects of happiness and sadness on moral reasoning. *Journal of Moral Education*, *29*(4), 397–412.

Consuming with Mindfulness: Import of Buddhist Philosophy for an Ethic toward Consumerism

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ABSTRACT

This essay grounds itself in the recent debate concerning the imposition of moral obligations on individuals because of their indulgence in over-consumption practices. There is a growing body of literature that argues against imposing moral obligation on individuals because the contribution of individuals' consumption to global warming is insignificant. In this context, by drawing insights from Buddhist philosophy, I posit that the normative ground to impose moral obligation on individuals, however, may not always be the environmental harms, rather, I particularly demonstrate how the individual-centered moral deliberation of Buddhist philosophy regarding consumption can be a sufficient moral ground to make an individual responsible of his or her own consumption. First, I will provide a detailed account of how over-indulgence in consumerism is seen in Buddhist tradition. This will particularly explicate why, according to Buddhist tradition, endless persuasion of the materialistic path to satisfying one's desire, is considered a moral wrong. Through this premise, I also refute the usual belief that consumption actually offers an individual happiness and make her feel contented in life. After unpacking the drivers behind consumption and highlighting the major shortcomings of those, I further borrow from Buddhist thoughts to delineate avenues that can lead us out of the prevailing consumerist lifestyle. I invoke the notion of mindfulness to enhance our power of self-reflection and to critically review our own consumption. In conclusion, I affirm that mindfulness at both individual as well as collective level could be an appropriate way to move toward a sustainable and just society.

Keywords: Buddhism, climate change, consumerism, gas-guzzler, mindful consumption

INTRODUCTION

In the past decade or so, especially after climate change discourse have significantly gained prominence, moral and ethical implications of indulging in normatively defined wasteful or "over"-consumption practices, have become an important topic of debate in the discipline of environmental ethics (e.g., Michaelis 2000; Wenz 2001, Yaacob 2004). Scholarly works like Westra and Werhane (1998), and Crocker and Linden (1998) comprehensively discussed various takes on the ethics of modern-day consumption practices and delineate avenues for proceeding toward a regime of sustainable consumption. There is also a growing body of literature (e.g., Baatz 2013, 2014; Baatz & Ott 2017; Bell 2008; Caney 2005, 2006, 2009; Gardiner 2011; Garvey 2008; Jamieson 2007; Page 2008; Shue 1993; Singer 2009, 2010) deliberating on the moral and ethical implications of various consumption practices, based on the argument that those practices are energy intensive and thus can contribute to the rise in anthropogenic emission of Green House Gases (GHGs), in turn causing climate change. Broadly speaking, there are two main concerns around which the debates in this literature seem to be based: whether Emissions Egalitarianism (EE) is a just proposition to make in this highly carbon-unequal world or emissions cut should be implemented at equal proportions throughout the world, and who should bear the responsibility of GHGs emissions, is it individuals or institutions. Scholars such as Caney, Baatz, Ott, Singer, Seidel, Bell (Baatz 2013 & 2014; Baatz & Ott 2017; Bell 2008; Caney 2005, 2006, & 2009; Singer 2002; Seidel 2013) argued that emissions need to be divided in an egalitarian manner and not by per capita estimate that had gained popularity as endorsed by mainly non-governmental organizations, leading politicians, and academics (Baatz & Ott 2017). Baatz and Ott (2017) also highlighted that "Criticism of EE usually seems to be motivated out of self-interest from high polluters."

In regard to the second concern, Scholars like Neuteleers, Johnson, Sinnot-Armstrong, Sandberg, Cripps, argue[1] that the moral obligation regarding restricting certain consumption practices due to their contribution to climate change, cannot be rightfully placed on individuals. As Sinnott-Armstrong (2010) remarked "Global warming and climate change occur on such a massive scale that my individual drive makes no difference to the welfare of anyone." One of the most prominent questions that are referred in this case is whether it is a morally rightful act to ride a "gas-guzzling" car just for amusement and can there be any moral obligation imposed on an individual to restrain his or her from indulging in such acts? The main argument, as already highlighted, that is put forth by the aforementioned scholars is that an individual's contribution to any global scale phenomenon like climate change is really inconsequential and thus, the moral obligation should be imposed on institutions

[1]Cripps 2013; Neuteleers 2010; Johnson 2003; Sandberg 2011; Sinnot-Armstrong 2010; Sandberg 2011

and governments, instead of individuals. And in this context, the example of riding a gas-guzzler is really an apt one considering an individual may not need to use such vehicle to meet the basic need of using a car, that is mobility. Most likely owing to this reason, this example is widely employed in the aforementioned literature. I am also going to keep this practice as a background example throughout this essay. In the conclusion of this essay, I will highlight how the entire deliberation could contribute to this question whether it is morally just to ride such a car in this climate-constrained world.

There are scholars such as Hiller, Nolt, Schwenkenbecher (Hiller, 2011; Nolt, 2011; Schwenkenbecher, 2014) who opposed the above stream of literature and argues that individuals (particularly the ones whose carbon footprints are substantially higher than the rest) should be held responsible for their respective GHGs emissions. On that same vein, Nolt (2011) attempts to estimate what is the harm done by the emissions made by average American citizens. Although he indicates at the outset that the estimates are crude, these do help in situating the argument that EE seems the right path forward as being our collective response to this mammoth crisis that all of humanity is faced within the form of climate change. To summarize, these works addressing the second concern primarily argue whether individuals, especially wealthy or well-to-do ones, should morally be held responsible to curtail their consumption practices and habits for a greater good of the entire of humanity in particular and earth in general.

This essay would be an attempt to contribute to this debate from a completely different as well as a novel perspective. Throughout the essay, I would build the argument to its depth and breadth that an individual ought to be held responsible for his or her consumption practices, not only for the environmental or social impacts of those consumption practices, but also, because any form of over-indulgence in consumption is not a morally rightful act even from the point of view of one's own life. Michaelis (2000) rightly notes, "The association of material consumption with the greater good contradicts the teachings of religions and philosophers over the last three thousand years." There is a body of literature that pays attention to the "ecological turn" in many religious faiths (e.g., Gottlieb, 2006; Kinsley, 1995). Tucker, one of leading religious studies scholars working in this field, states that "religious scholars, such as Tucker, Sullivan, John Grim, Duncan Ryuken Williams, and others note that many of the world's major religious traditions are entering what may be classified as an "ecological phase" in which the people of these traditions are now developing ethics concerning the environment" (Tucker, 2003). Thomas (2011), a comprehensive work in this regard, examined "the extent to which religions can be seen as powerful countercultural resources in the struggle to create new and less damaging conceptions of 'the good life', or whether they are themselves now so deeply implicated in consumerism and historically rooted in the pursuit of material prosperity as to be ineffective in this regard."

In this essay, I am particularly drawing from the Buddhist tradition to justify the aforementioned statement and substantiate my argument that we really do not need to employ the rampant environmental degradation as the necessary normative stance to mark certain consumption practices as morally wrong. Here, it is important to provide the rationale behind why I am choosing to focus particularly on Buddhist tradition over other religious traditions. First, the Buddhist tradition generally focuses on the individuals and strive to put forth an ethic that everyone could uphold in his or her individual life-journey. Loy (1997) noted that perspectives of Buddhist tradition on this matter delineated avenues through which individuals could "unhook" themselves as well as their respective mindsets from the bindings that "consumerism" imposes and, eventually, from the religion of the market. He saw Buddhist teachings could significantly aid individuals to "unhook" themselves from already established assumptions embedded within specific traditional standpoints. Second, I would like to highlight that, may be owing to the earlier point I mentioned, there is already a growing body of literature (I will discuss this as I go along in the essay) that delineates the import of Buddhist philosophy in understanding the consumer culture. In this context, my attempt in this essay is to particularly demonstrate how the individual-centered moral deliberation of Buddhist philosophy, regarding consumption can be sufficient to make an individual morally responsible and mindful about his or her own consumption.

In the following, first of all, I will provide a detailed account of how consumption, especially over-indulgence in consumerism, is seen in Buddhist tradition. This will particularly explicate why, according to the Buddhist tradition, endless persuasion of the materialistic path to satisfying one's desire, is considered a moral wrong. Following that, I will briefly discuss the Buddhist's take on why there is such proliferation of consumerism in the modern world. Based on these insights, my attempt would be to develop an ethical principle through which prevailing consumerism in the current society can be moderated toward a conducive atmosphere that can foster and encourage morally responsible consumption patterns.

Consumption and Buddhist Philosophy

Regarding consumption, Buddhist stance is nowhere near to be denoted as negative, or consumption in general is not considered as an outright wrong act (Essen 2010). Indeed, consumption or basic consumption is considered as highly essential means that can help people come out of poverty (Harvey, 2013). Buddhist philosophy minutely differentiates between consumeristic attitude and consumable products. Buddhism denotes that there is nothing inherently wrong associated with any product, indeed the problem lies on one's intention as Harvey says "… a focus on amassing wealth is problematic, but wealth itself is not evil; the important thing is how it is made and used" (Harvey, 2013). In this regard, it is apt to revisit the insights provided by Buddha to

decide whether any act of generating wealth is immoral or not (e.g., SN.IV.331-337). The first thing that needs to be considered here is the manner in which a particular wealth is produced. Buddhism elaborates that no other being should be harmed in the process of generation of a particular wealth, otherwise, the wealth will be regarded immoral. Second, one has the complete right to enjoy or make life easier with the help of the wealth generated through one's own hard work, provided the use of it, is directed toward *karmically* fruitful action to help oneself as well as other beings (Harvey, 2013). Third, even if a wealth is produced in the appropriate manner and used for benefiting oneself and other beings, it may still become immoral if one approaches that wealth for satisfying his or her greed or longing and in the process gets attached to that wealth (Ibid; Essen 2010). Hence, it is quite clear that Buddhist philosophy decides morally right and wrong act, not by directly judging a wealth or an object, rather, by evaluating the process of production, usage of the product, and the underlying motives behind its consumption. In other words, instead of just deliberating upon a wealth or its process of production, for determining its moral status, Buddhism accentuates the need to understand one's relationship with that wealth by reflecting on the process of accumulation.

Now coming to consumption from wealth generation, Buddhism considers consumption as just a means to achieve happiness. Moreover, it is also considered as an inevitable basis for a life that can foster spiritual and moral development (Harvey, 2013). Ven Payutto clearly states that consumption must only be seen as "a means to an end, which is the development of human potential" (p. 43) or "well being within the individual, within society and within the environment" (p. 35). Although Buddhism highlights the need of consumption or rather, basic consumption, it strongly critiques heedless indulgence in consumption as part of the consumer culture or consumerism. In this regard, Kaza (2010) comprehensively charts out three main components of Buddhist's critique of consumerism and over-indulgence in consumptive activities. These are first, consumerism produces false identity; second, consumerism inherently promotes harm to other living beings; and third, consumerism promotes clinging and attachment and distracts one from the right path of spiritual development. Here, I argue, the first and the third critiques provide some unique moral basis of approaching consumerism, as against the overall critique of consumerism being one of the main causes of the current environmental crisis, primarily, put forth by the second one. These two critiques also indicate why consumerism could be marked as an equally harmful activity toward oneself, like it is to the other living beings or the environment as a whole. Particularly, considering the possibility of exploring a new ground to morally evaluate consumption, a further in-depth exploration of these two critiques will perhaps help us evaluate whether wasteful indulgence in consumption activities such as driving a gas-guzzling car just for amusement can be morally justifiable or not.

One of the primary foundations of consumerism is that increasing consumption actually helps fulfilling various wants and needs of an individual and in turn, provides happiness that every one of us innately seeks. Buddhist philosophy, however, strongly opposes this belief, and contends that this is nothing but an upshot of the deeply rooted ignorance about the true nature of things. Ash (2011) noted "The starting point for a Buddhist analysis of the 'happiness problem' is the starting point of the Dhamma, the Buddhist world-view, itself: dukkha – suffering, unsatisfactoriness – and its cause. Its proximate cause is *taṇhā*, strong desire or craving. Its root cause is *avijja*, ignorance." Buddhism also adds, due to this far-reaching ignorance, human beings in consumer culture, are oblivious to the fact that the only permanent thing in this world is the complete impermanence of everything (Ash 2011). As per the theory of impermanence, there is no stable form of the material world—everything is in a constant process of change and modification (van den Muyzenberg 2011). On that same vein, Ash (2011) again added "It would be hard to find a more obvious illustration of *avijja*, the Buddhist notion of ignorance: not understanding the nexus between impermanence, identity and discontent." Not only refuting the presence of the material world, according to Buddhism, happiness cannot be achieved through continual fulfillment of material wants. Rather, as per Buddhist philosophy, indulgence in the everlasting urge to fulfill one's desires, is the main cause of suffering. Zsolnai

(2011) in this regard highlights that "From a Buddhist point of view the optimal pattern of consumption is to reach a high level of human satisfaction by means of a low rate of material consumption. This allows people to live without pressure and strain and to fulfill the primary injunction of Buddhism: 'Cease to do evil; try to do well.'" We feel that we desperately want something to accomplish our needs and sooner or later, the final objective of fulfilling the need becomes secondary and we remain caught up in a constant persuasion from one desire to another, ultimately leading us to suffering. In a way, any behavior that fuels the craving or the feeling that "I want to have or possess," actually instill suffering in our lives.

Consumerism in the Light of Four Noble Truths

To elaborate on the above idea of craving leading to suffering, let us revisit one of the main components of Buddhist philosophy: The Four Noble Truths. As per Kaza (2000), these truths can be seen as a medical diagnosis: where suffering is the disease, and craving or *taṇhā* is the main cause of the disease. In other words, the second truths for the Spiritually Ennobled (*ariya-saccas*) as *taṇhā*—craving, or demanding desire—is seen as the key factor responsible for the suffering and unhappy state of human life (Harvey, 2013). The same is reflected in the following quote from Harvey (2013) as well:

> *Now this, monks, for the spiritually ennobled, is the originating-of-the-painful true reality. It is this craving,*

giving rise to rebirth, accompanied by delight and attachment, finding delight now here, now there. . . (SN V. 421).

Here, *taṇhā* can be literally translated as thirst, and can be taken as indicative of that overpowering and demanding desire that is always looking for avenues to gratify itself. Just to elaborate, as per Harvey (2013), *taṇhā* instills suffering and painfulness in human life in three different paths. First, this leads to the suffering due to frustration. This perpetuating and everlasting desire never gets fulfilled and subsequently, impels human beings to relentlessly look for ways to fulfill it. At the same time, it also constantly induces one to crave for something other than what the individual possess at a particular moment. In a way, it never allows one to feel the contentment and gets satisfied with one's own possession. Thus, naturally, always one would suffer for the things one does not possess at any particular moment. Second, *taṇhā* also constantly drives one to plunge into some or the other action, and subsequently, diverges that individual from a right spiritual path that can lead her to liberation. In other words, it does not provide any scope to an individual to relax and reflect on one's life, which is absolutely instrumental in following any path of spiritual progress. Failing to attain or even proceed toward liberation, human beings remain caught in the perpetual cycle of birth and rebirth, and also suffer continually in each and every life. Third, the strong drive to fulfill *taṇhā* often gives rise to conflict, clash, and

quarrels between groups as well as among individuals, and most importantly, hinders liberation for all of them. In this regard, Harvey (2013) identified three types of craving or *taṇhā*: sensual pleasure or kāma; attaining and maintaining certain identity or enhancing one's ego, this also prompts individual 'to become' somebody; getting rid of things that are unpleasant or thought to be so. In this regard, I posit, the second type of craving for ego-enhancement is really becoming prominent in the current consumeristic society (Belk, 2013; Grabiel, 2013; Khanom, 2010; Xavier, 2016) and will be dealt separately in this essay, as being one of the main drivers of the recent proliferation of consumerism. Hence, evidently, according to Buddhism, true happiness cannot be achieved if one approaches desire materialistically, rather, one has to come out from this vicious cycle of desire, craving, and wanting, to attain a state of happiness and bliss. The insight from Buddhism that over-consumption is actually counterproductive in attaining true happiness is clearly captured in the following statement by famous Buddhist writer David Loy (1997):

The final irony in this near-complete commodification of the world comes as little surprise to anyone familiar with what has become addictive behavior for 59 million people in the U.S. (Dominguez and Robin 171). Comparisons that have been made over time and between societies show that there is little difference in self-reported happiness. The fact that we in the

developed world are now consuming so much more does not seem to be having much effect on our happiness. (Durning 38–40)

Based on this understanding, as per Ven Payutto, Buddhist philosophy distinguishes wrong and right consumption, with the former indicating the use of goods and services "to satisfy the desire for true well-being," and the latter for satisfying "the desire for pleasing sensations or ego-gratification" (p. 41), limited only by one's ability to afford what one wants (p. 43). Zsolnai (2016) noted "Right consumption based on *chanda* is the use of goods and services to achieve true well-being. Wrong consumption arises from *taṇhā*; it is the use of goods and services to satisfy the desire for pleasing sensations or ego-gratification." Unfortunately, in the present society, individuals are increasingly getting attracted toward the latter one or the wrong one for that matter. Even, simply driving a gas-guzzler can also be marked as a wrong one, as primarily this type of status or conspicuous consumption practices is directed toward differentiating oneself from the masses for enhancing and establishing one sense of self or can be denoted as ego-enhancing consumerism.

To further elaborate on ego-enhancing consumerism, now I will explain how Buddhism problematizes the creation of false identities by consumerism. It is already indicated that striving toward gaining a greater sense of identity, is one of the prominent types of craving that generally

does not lead to any life satisfaction or happiness (Kilbourne 1989). Zsolnai (2016) explained why it was so difficult to find happiness through the pursuit of consumerism. He elaborates:

The pursuit of income and consumption is unsatisfactory in itself because of eventual adaptation and social comparison. Trapped on hedonic and social treadmills, we over-invest our time in paid work and associated commuting at the expense of building and maintaining valuable relationships with family and friends, and within the wider community. Clearly many of our choices – what to buy, how many hours to work – often do not bring us happiness. (Zsolnai, 2016)

In a way, acquiring material objects to create an extended self or enhance one's ego, is like chaining oneself to a vicious cycle of illusive consumption. In this regard, Thompson (1995) rightly described the self in the present world of consumerism as a *symbolic project.* This is *symbolic* because each and every individual needs to create it based on the symbolic meanings of various consumer goods, and it is a *project* because one has to carefully construct one's identity by actively appropriating the socio-culturally defined meanings of things. It is like "the individual weaves into a coherent account of who he or she is, a narrative of self-identity" (Thompson, 1995, p. 210). The symbolic self-completion theory by Wicklund and Gollwitzer (1982), suggested that "if individuals feel insecure in social

roles, then they will attempt to 'complete' their discrepant self-concept by the use of symbols they believe to demonstrate role competence" (Wattanasuwan & Elliot, 1999). This over-emphasis on creating selfhood or identity through a symbolic project can be considered completely a false persuasion, as Buddhism always advocates the concept of no-self or *anatta*. Generally, this concept of "no-self" is interpreted as if, it promotes there is no-self which is intrinsically present, and which can't be marked as unified, transcendental, or fixed (Wattanasuwan & Elliot, 1999). The real concept of *anatta* in Buddhism, however, cannot be equated with the idea of mere no-self, rather,

> *...the Anatta Doctrine in Buddhism advocates that individual existence, as well as the whole world, is in reality nothing but a process of ever-changing phenomena. There is nothing absolute in this world; everything is in continuous flux and is relative, conditioned and impermanent* (Wattanasuwan & Elliot 1999).

Thus, to avoid getting caught in false identities and suffering, we should avoid indulgence in various symbolic projects directed toward creating different identities to appreciate the true nature of things as *anatta*.

The conclusion of Buddhism that happiness cannot be achieved by any attempt to fulfill *taṇhā* or for that matter, by striving to create newer identities with the help of various consumer articles,

actually make it necessary to look for some alternative ways to achieve happiness. In a way, Buddhist scholars clearly demonstrate that the path of consumerism cannot really lead any one to happiness as being fueled by *taṇhā*. It strongly promotes that instead of hedonistically driven self-centered pursuit of happiness, one should realize that by only helping others, true happiness can be obtained. Generosity and sharing are always considered as a sustained source of happiness in Buddhism as against the present consumerist society's focus on consumption as being that source. As Nāgārjuna says:

> *Through using wealth there is happiness here and now, Through giving there is happiness in the future, From wasting it without using it or giving it away, There is only misery. How could there be happiness?* (RPR.315).

Moreover, Buddhism also prescribes that the right mode of achieving happiness, perhaps, could be of enjoying the success of others. It provides a different level of happiness that generally termed as *mudita* or emphatic joy in Buddhism. If one can really achieve this emphatic joy, then one will not feel miserable upon seeing someone else's possession and naturally, new desires will not be ignited to direct that individual into suffering.

Consuming with Mindfulness

At this juncture, it is quite clear that heedless engagement in certain consumption activities can be morally judged as wrong beyond its

socio-environmental impacts. Rather, if one acknowledges the worldview promoted by Buddhism, then it is clear that one would fail to really attain any long-lasting happiness and satisfaction in pursuing the path of status consumption. Hence, it is important to develop some moral principles and ethical guidelines to explore the manner in which we can collectively promote mindful consumption practices, which will help us to follow a path of spiritual and moral development for ensuring both individual as well as collective wellbeing.

The Buddha has provided us the Noble Eightfold Path, which presents a teaching about the right way to conduct and live one's life. It shows us how to evaluate, develop, and practice the right way to do everything that one does throughout the course of her lifetime. According to me, it does seem to be a particularly well-suited point of reference for finding the right way to consume. Here, I would accentuate on the proposal made by Wilker (2004) that while consuming, one must strive to adhere the three essential wisdoms of any Buddhist training and practice, the threefold skills: wisdom, morality, and mental discipline.

First and the foremost, *sila* is particularly pertinent to developing an ethical dimension toward consumption. This means that one needs to be more mindful and should incorporate moral considerations while consuming, instead of just prioritizing *taṇhā* and trying to blindly fulfill that. As per Wilker (2004), we should be completely conscious about the harm or the good, a product might cause to individuals, society

and to the environment. If a product is found to have some harmful component, then we should restrain ourselves from consuming that. We should find some better ways to spend our hard-earned money, instead of just spending on some consumer goods to gain happiness. We can find some ways, where it will not only benefit us, rather, would benefit others as well (Wilker 2004).

Moreover, considering *sila* alone, may not be enough, and one needs to consider it along with *Samadhi* and *Panna* (Kaza 2000). *Samadhi* and *Panna* primarily, suggest that any moral behavior should be based on right condition of mind and wisdom. Indeed, the foundation of any moral behavior in Buddhism is "to be mindful" (*samma sati*) of one's doings. The reason behind mindfulness being the fundamental principle for moral behavior in Buddhism can be understood if one considers the Buddha's doctrine of mind, which says that the mind is the source of all the good and evil that arises within and befalls us from without (Wilker, 2004). Highlighting the same point, the *Dhammapada* opens with the words: "Mind precedes all things; all things have mind foremost, are mind-made". Mindfulness can be considered as being aware of one's own thoughts. If we extend this principle in the present world of consumerism, one needs to be consciously aware of each and every thought. This awareness will guide an individual to be able to control those thoughts that give rise to desires in one's mind to buy new stuffs and indulge in various consumption practices. By consuming mindfully, we must be able

to see the effects of our consumption and also be aware about the futility of indulging in desires.

In this regard, I contend, the role of wisdom is also needs to be highlighted. Wisdom can be considered as the first two factors of the Noble Eightfold Path, namely Right Understanding *(samma-ditthi)* and Right Thought (*samma-sankappa*). These two faculties help us to get rid of the clouded view of things—to see life as it really is (Wilker 2004). These also enable us to understand the reality of the way things are; to see that all that is subject to arising is also destined to ceasing, and to thus accept the nature of all things "as being impermanent (*anicca*), subject to suffering (*dukkha*) and void of self (*anatta*)" (Wilker, 2004). These two faculties also uphold the view that everything is subject to the law of causes and conditions, the law of *kamma*. Equipped with such understanding, we can make truly wise and virtuous decisions, even, while deciding what to consume and how much would be sufficient for a simple but a virtuous life. In the light of this understanding, it can be concluded that for consuming mindfully, we need to be reflective of each of every action of ours, so that we are able to identify our motives behind each of them (Armstrong & Jackson, 2015). In this regard, Armstrong and Jackson (2015) further added:

> *Mindfulness offers us a different way of approaching the continuous project of negotiating our personal and social identity. It supports our intrinsic value orientations, and helps us navigate our own priorities in the face of powerful extrinsic forces which threaten to undermine pro-social behavior and privilege selfish hedonism. It allows us to negotiate meaning: personal meaning through an enhanced understanding of what matters to us; social meaning through greater connectedness with the world around us; and perhaps even existential meaning, by allowing us to face up to our own mortality and the mortality of those we love.* (Armstrong & Jackson, 2015)

This will enable us to abstain ourselves from any consumption that is purely driven by greed, hate, or delusion. Even consumption toward ego-enhancement also must be avoided as constantly striving toward attaining newer identities can only invoke psychological suffering and make our life miserable. Moreover, the most important thing is to stop oneself from continual persuasions of desires and instead, focus more on spending quiet moments to be able to provide our conscience the necessary scope and space for critical self-evaluation and self-reflection.

CONCLUSION

This essay begins by charting out that in literature, there is a growing body of scholarly works that promotes individual should not be held responsible for indulging in any wasteful consumption activities, as the direct contribution of an individual's consumption to global warming is rather insignificant. I delineate in this essay, how Buddhist philosophy offer us a way to go

beyond the prevailing mode of evaluating consumption from the point of view of the subsequent environmental degradation. Instead, as per this philosophy, over-indulgence in consumptive activities is not at all recommended from the point of view of human well-being, which is absolutely necessary for a spiritually and morally motivated life. At this juncture, although one might argue that the wasteful consumption practices still can be considered as a valid means of obtaining happiness for consumers, Buddhist philosophy clearly establishes that it is solely an illusion, and in the long run, the consumer would not be able to achieve any form of sustained happiness. The utter futility of the commonly held notion about the link between consumption to happiness or contentment, can also be empirically verified with the present unrest and upheaval in the society, as even, with so much of progress and advancement in our quality of life (primarily defined as the convenience one experiences in this highly energy dependent era of consumerism), we can find human beings are still suffering and are not at all satisfied with their lives. Even though, in the past three decades or so, GDP of US and Japan witnessed staggering upsurge, the subjective measures of happiness have consistently remained the same, even for individuals who have acquired more wealth in that said period (Daniels, 2011). Neuroscientific research has clearly given credibility to the claim that just satisfying many of our desires do not bring us happiness which is long-lasting (Colin, 2007). In other words, once

individuals fulfilled their basic needs for shelter, nutrition, and health, accumulation of further wealth generally do not make them more satisfied (Inglehart, 2000; Jackson and Marks, 1999; Michaelis, 2000; Schwarz & Schwarz, 1998). To express in the words of Schwarz and Schwarz (1998), "the emerging global market is in effect a new world empire worshipping false gods of consumerism and greed." Particularly, pertaining to that, I see, numerous psychological issues are surfacing day by day due to the immense societal pressure of establishing your very own identity through the help of various material goods like one's car, house, or other consumer articles (Dittmar, 2007). So, in a way, these energy intensive consumption practices can really be termed "wasteful," as these use up a significant amount of energy and material, but completely fail to provide consumer any long-lasting happiness.

As a ray of hope, although the pursuit of consumerism may not lead to any kind of contentment, it is quite evident that the less-energy intensive simple lifestyle can make one happier and satisfied with one's life. Thus, if an appropriate worldview is adopted, environmental sustainability and mental satisfaction both can be achieved at the same time. For this reason, Jackson (2005) had termed the pursuit of simple and environment-friendly lifestyle as a path of "double dividend." In this context, Yaacob (2004) stated "Authors like Walter and Dorothy Schwarz (1998) spent three years travelling in Britain, Europe, USA, Australia, India and Japan to find out how is it like to live a simpler life beyond

supermarket. They found that people who live a simpler life is much happier." I see, this type of simple living could possibly help individuals realize the importance of *mudita* or emphatic joy. As already indicated, in this state of happiness, one goes beyond any relative happiness that constantly compares oneself with others. Rather in this state, one attains a different level of satisfaction with oneself by abstaining from the consumeristic persuasions solely driven by *taṇhā*. I see, in this state, one can consciously choose a different form of living to be on the right path of spiritual development and also help others to follow that path. This simple living, I propose, could also give rise to an alternative form of consumption as in this state, one no longer wants to aid one's sense of identity with various consumer articles. In this mode of living, consumption remains just as an indispensable way to sustain oneself and to maintain a healthy mind where a healthy soul can flourish. This simple living in a way reduces the role and importance of consumer goods to mere sustenance and in turn, promotes a detached approach towards these goods. However, theoretical understanding does not always translate that effectively in the pragmatic realm. Rather, I see, a massive socioeconomic reformation of our societal structure is highly required for assisting individuals in choosing the right worldview towards life. At the same time, extensive awareness building at the level of individual is equally essential to make this simple mode of living a choice that individuals would like to make. A

comprehensive philosophical understanding as provided by Buddhism is particularly conducive to induce the necessary changes at the individual as well as the collective realm for moving towards a sustainable and just society, where all the citizens would be completely satisfied with their simple but highly motivated and holistic lifestyle.

REFERENCES

Armstrong, A., & Jackson, T. (2015). *The Mindful Consumer Mindfulness training and the escape from consumerism*. Retrieved December 12, 2017, https://www.foe.co.uk/sites/default/files/downloads/mindful-consumer-mindfulness-training-escape-from-consumerism-88038.pdf

Ash, C. (2007). Happiness and economics: A Buddhist perspective. *Society and Economy*, *29*(2), 201–222.

Ash, C. (2011). Do our economic choices make us happy?. In L. Zsolnai (Ed.), *Buddhist economics: Ethical principles and operational models*. Berlin: Springer Verlag.

Baatz, C. (2014). Climate change and individual duties to reduce GHG emissions. *Ethics, Policy & Environment, 17*(1), 1–19.

Baatz, C. (2013). Responsibility for the past? Some thoughts on compensating those vulnerable to climate change in developing countries. *Ethics, Policy & Environment, 16*(1), 94–110.

Baatz, C., & Ott, K. (2017). In defense of emissions egalitarianism. In L. Meyer & P. Sanklecha (Eds.), *Climate justice and historical emissions*. Cambridge: Cambridge University Press.

Belk, R. (2013). Extended self in a digital world. *Journal of Consumer Research, 40*, 477–500.

Bell, D. R. (2008). Carbon justice? The case against a universal right to equal carbon emissions. In S.

Wilks (Ed.), *Seeking environmental justice* (pp. 239–257). Amsterdam and New York: Rodopi.

Caney, S. (2005). Cosmopolitan justice, responsibility and global climate Change. *Leiden Journal of International Law, 18*, 747–775.

Caney, S. (2006). Environmental degradation, reparations, and the moral significance of history. *Journal of Social Philosophy, 37*, 464–482.

Caney, S. (2009). Justice and the distribution of greenhouse gas emissions. *Journal of Global Ethics. 5*, 125–146.

Cripps, E. (2013). *Climate change and the moral agent. Individual duties in an interdependent world.* Oxford and New York: Oxford University Press.

Crocker, D. A., & Linden, T. (Eds.). (1998). *Ethics of consumption*. Oxford and Lanham, MD: Rowman and Littlefield.

Daniels, P. L. (2011). Sustainable consumption – ethical foundations. In L. Zsolnai (Ed.) *Buddhist economics: Ethical principles and operational models*. Berlin: Springer Verlag.

Dittmar, H. (2007). *Consumer culture, identity and well-being: The search for the 'good life' and the 'body perfect'.* New York City, USA: Psychology Press.

Dominguez J., & Robin. (1993). *Your money or your life: Transforming your relationship with money and achieving financial independence*. Harmonsworth: Penguin.

Durning A. (1992). *How much is enough?*. New York, NY: W.W. Norton.

Essen J. (2010). Sufficiency economy and Santi Asoke: Buddhist economic ethics for a just and sustainable world. *Journal of Buddhist Ethics*, *17*, 70–99.

Gardiner, S. M. (2011). *A perfect moral storm: The ethical tragedy of climate change.* New York, NY: Oxford University Press.

Gottlieb, R. (2006). *The Oxford handbook of religion and ecology.* Oxford and New York: Oxford University Press

Harvey, P. (2013). Buddhist reflections on "consumer" and "consumerism". *Journal of Buddhist Ethics, 20*, 334–356.

Hiller, A. (2011). Climate change and individual responsibility. *The Monist, 94*(3), 349–368.

Inglehart, R. (2000). Globalization and postmodern values. *The Washington Quarterly*. Winter, 215–228.

Jackson, T., & Marks, M. (1999). Consumption, sustainable welfare and human needs with reference to UK expenditure patterns between 1954 and 1994. *Ecological Economics*, *28*, 421–441.

Jackson, T. (2005). Motivating Sustainable Consumption—A Review of Models of Consumer Behaviour and Behavioural Change. A Report to the Sustainable Development Research Network. London: Policy Studies Institute.

Jamieson, D. (2007). When utilitarians should be virtue theorists. *Utilitas, 19*(2), 160–184.

Johnson, B. (2003). Ethical obligations in a tragedy of the commons. *Environmental Values, 12*(3), 271–287.

Kaza, S. (2000). Overcoming the grip of consumerism. *Buddhist-Christian Studies, 20*, 23–42.

Kaza, S. (2010). How much is enough? Buddhist perspectives on consumerism. In P. Richard (Ed.), *How much is enough? Buddhism, consumerism and the human environment*. Boston, MA: Wisdom Publications.

Khanom, A. (2010). Postmodern visions: Consumer culture's (re)making of the gaze. *BRAC University Journal*, *VI1* (1 & 2), 61–66.

Kilbourne, W. (1989). The critical theory of Herbert Marcuse and its relationship to consumption. In R. Bagozzi & J. Paul Peter (Ed.), *Making theory and Practice.* (pp. 172–175). Chicago: American Marketing Association.

Kinsley, D. (1995) *Ecology and Religion: Ecological Spirituality in Cross-Cultural Perspective.* Englewood Cliffs NJ: Prentice Hall.

Kritsadarat, W., & Elliott, R. (1999). The Buddhist self and symbolic consumption: the consumption experience of the teenage Dhammakaya Buddhists in Thailand. In Eric J. Arnould & Linda M. Scott (Eds.), *Advances in consumer research volume 26* (pp. 150–155). Provo, UT: Association for Consumer Research.

Loy, D. R. (1997). The religion of the market. *Journal of the American Academy of Religion, 65*(2), 275–290.

Michaelis, L. (2000). *Ethics of consumption.* Oxford: Oxford Centre for the Environment, Ethics and Society.

Neuteleers, S. (2010). Institutions versus lifestyle: Do citizens have environmental duties in their private sphere?, *Environmental Politics, 19*(4), 501–517.

Nolt, J. (2011). How harmful are the average American's greenhouse gas emissions?, *Ethics, Policy & Environment, 14*(1), 3–10.

Page, E. A. (2008). Distributing the burdens of climate change. *Environmental Politics, 17*(4), 556–575.

Payutto, B.P.A. [also known as Phra Rājavaramuni]. (1994). Buddhist Economics: A Middle Way for the Market Place. Bangkok: Buddhadhamma Foundation. Retrieved October 28, 2016, from http://www.buddhanet.net/cmdsg/econ.htm

Rami, G. (2013). *Why I buy: Self, taste, and consumer society in America.* Chicago, IL: University of Chicago Press.

Sandberg, J. (2011). My emissions make no difference. *Environmental Ethics, 33*(3), 229–248.

Schwarz, W., & Schwarz, D. (1998). *Living lightly – Travels in post-consumer society.* Charlbury: Jon Carpenter.

Schwenkenbecher, A. (2014). Is there an obligation to reduce one's individual carbon footprint? *Critical review of International Social and Political Philosophy, 17*(2), 168–188.

Seidel, C. (2013). *Complex Emission Egalitarianism and the Argument from Global Commons.* Unpublished manuscript.

Shue, H. (1993). Subsistence emissions and luxury emissions. *Law and Policy, 15*, 39–59.

Singer, P. (2002). *One world: The ethics of globalization. The Terry lectures.* New Haven, CT: Yale University Press.

Singer, P. (2009). Climate change as an ethical issue. In: J. Moss, (Ed.) *Climate change and social justice.* (pp. 38–50).Carlton, VIC: Melbourne University Publication.

Singer, P. (2010). One atmosphere. In S. M. Gardiner, S. Caney, D. Jamison, & H. Shue (Eds). *Climate ethics: Essential readings.* Oxford, UK and New York, USA: Oxford University Press.

Sinnot-Armstrong, W. (2010). Its not my fault: Global Warming and Individual Moral Obligations. In S. M. Gardiner, S. Caney, D. Jamison, & H. Shue (Eds.), *Climate ethics. Essential readings.* (pp. 332–346). Oxford, UK and New York, USA: Oxford University Press.

Thompson, J. B. (1995). *The media and modernity: A social theory of the media.* Cambridge: Polity.

Thomas, L. (2011). *Religion, consumerism and sustainability: Paradise lost?.* London: Palgrave Macmillan.

Tucker, M. E. (2003). *Worldly wonder: Religions enter their ecological phase*. Chicago, IL: Open Court Publishing Company.

Van den Muyzenberg, L. (2011). Leadership the Buddhist way. In L. Zsolnai (Ed.), *Buddhist economics: Ethical principles and operational models*. Berlin: Springer Verlag.

Wenz, P. S. (2001). *Environmental ethics today*. New York, NY: Oxford University Press.

Westra, L., & Werhane, P. H. (Eds.) (1998). *The business of consumption: Environmental ethics and the global economy*. Lanham, Maryland: Rowman and Littlefield .

Wicklund, R., & Gollwitzer, P. (1982). *Symbolic self-completion*. Hillsdale, NJ: Lawrence Erlbaum.

Wilker, J. (2004). The mindful way to consumer. *Bath Dharma Journal*, *1*, 1–4.

Xavier, M. (2016). Subjectivity under consumerism: The totalization of the Subject as a commodity. *Psicologia & Sociedade, 28*(2), 207–216.

Yaacob, M. (2004). Ethics of consumption: Individual responsibility. *MALIM: Jurnal Pengajian Umum Asia Tenggara*, *5*, 37–50.

Zsolnai, L. (2011). Why Buddhist economics?. In L. Zsolnai (Ed.), *Buddhist economics: Ethical principles and operational models*. Berlin: Springer Verlag.

Zsolnai, L. (2016). Buddhism and economic development. In G. D. De Angelis & T. Lewis (Eds.), *Teaching Buddhism* (pp. 344–360). Oxford, UK: Oxford University Press.

SOCIAL SCIENCES & HUMANITIES

In-service Teacher Training Program in Thailand: Teachers' Beliefs, Needs, and Challenges

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ABSTRACT

Teacher training is one of the most important aspects of professional development for teachers in education. This paper identified 22 primary in-service teachers' beliefs, needs, and challenges they faced with regards to teacher training program in Thailand. The research methods used were a modified questionnaire and individual and focus group interviews. Findings revealed that the beliefs of the primary teachers were shaped by their previous attendance and experience on teacher's training programs in the country. Engaging workshops, simple but relevant teaching strategies were reported to be the needs of these teachers in a teacher training program. Teachers also reported the lack of teaching resources, problems on implementing new teaching strategies, and a big class size as the challenges they have encountered in their own classrooms. Findings may be useful for the Ministry of Education, education policy-makers, and teacher's training institutions in the ASEAN region context to design a much more effective training program for the local teachers to improve their teaching capacity. Implications are discussed in the study.

Keywords: Education policy, primary teachers, teacher's training program, teacher education, Thai primary teachers

INTRODUCTION

Well-trained and highly qualified teachers are essential for quality education. Hence, professional development and continuous training of teachers are deemed significant in the teaching profession. Previous studies (Dudzik & Ngoc Nguyen, 2015;

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Hall, 2015; Jamil, Abd Razak, Raju, & Mohamed, 2011; Nguyen, 2015; Nguyen & Thuy, 2015; Steadman, 2008; Supriatna, 2015; Ulla, 2017; Widiati & Hayati, 2015) have explored various aspects of teacher training in different contexts and all believed that teachers' training is important for teachers. Supriatna (2015) and Ulla (2016) emphasized that teachers' training can have a positive impact on teachers' teaching strategies, which students can benefit. Realizing the importance of teacher training and its benefits toward better education, this has received greater attention by some researchers, education policy-makers, the Ministry of Education officials, and the governments in most countries in Southeast Asia and in Thailand in particular (Ulla, 2017).

Thailand has been updating and reforming its education system as a result of the low English proficiency level among Thai students as reported by the Educational Testing System in 2010. This poor English proficiency level among the students is linked to the poor teaching skills and teaching strategies among teachers (Kaewmala, 2012; Kongkerd, 2013; Simpson, 2011). Thus, the government, together with some public and private schools across the country, has been serious about addressing this problem. Schools have been continuously hiring and placing foreign teachers; native or non-native to teach English in most Thai schools across the country (Hickey, 2014). Likewise, teachers' training program is also being strengthened in order to equip teachers the necessary knowledge and skills in teaching.

A number of schools and organizations around Thailand have also been conducting and offering teachers' training programs to teachers in the primary, secondary, and tertiary levels to update their teaching skills, methodologies, and strategies. However, only a few studies in Thailand have been conducted with regards to teachers' needs in the training program. Thus, this present study is conducted in order to explore the beliefs, needs, and challenges of local primary school teachers in Thailand with regards to teacher training. It is hoped that the result of this study would shed light on the issues concerning teacher training program not just in Thailand but in the whole ASEAN region. This study will have implications for the education institutions, Ministry of Education, and other education policy-makers in the ASEAN region. Understanding the local teachers' needs and by addressing and identifying the kind of training program appropriate for these teachers will create an impact for the betterment and development of the education system in the region.

LITERATURE REVIEW

Teacher Training in ASEAN Community

In a country where teachers play the most important role in its development and progress, a teacher should be qualified, well educated, and well trained in order to deliver the lessons to the students effectively in the classroom. Continuous teacher training should also be held and conducted so that the teachers can attend to update their teaching

skills especially for those teachers who are in service for many years. Teacher training is believed to be helpful in updating the teaching strategies of the teachers (Ulla, 2018). In fact, some of the previous studies that concentrate on teacher's training programs (Jamil et al., 2015; Nguyen, 2015; Nguyen & Thuy, 2015; Steadman, 2008; Supriatna, 2015) have focused so much on the effects of teacher's training program, the role of teachers in the academic field, updating teacher's skills and competence, and teacher's development. Other studies like Dudzik and Ngoc Nguyen (2015); Hall (2015); Ulla (2017); Widiati and Hayati (2015); concentrated on building English competency and English language teacher education. All these researchers and practitioners in the field of teacher education agreed that teachers are the vital component in the quest for quality education in schools and in the country in general. If education system has to be reformed, teachers are the first people who will be trained since the learning of the students at school largely depends on their knowledge and the skills. Thus, sending the teachers to training, workshops, and conferences and letting them pursue professional development are just right as they make a significant contribution in the education system reform and in the learning of the students at schools.

In the ASEAN community, there has been a considerable number of teacher training programs going on in the past years. This has been fueled by the movement of the ASEAN Economic Community (AEC) in 2015 where regional economic integration among the country members of ASEAN is pursued. Thus, education is one of the areas being prepared for in this economic integration and teachers play the pivotal role in this education reform. For example, in Vietnam, several English teacher training universities were formed to address teachers' language proficiency, teaching capacity, action research, assessment, and use of technology in language teaching (Dudzik & Ngoc Nguyen, 2015). This network was formed in light of the English education reform in the country that was mandated by the government since teacher education institutions can no longer hold training programs for public school teachers in the country. Likewise, Brunei has acknowledged the importance of learning the English language for the improvement of the people in the ASEAN region. Thus, English language training was formed in order to train and help the people from other member-countries within the region to improve their English language skills (Haji-Othman & Sharbawi, 2015).

In Indonesia, Widiati and Hayati (2015) stated that the government implemented the English Language Teacher Professional Education (PPG) for the teachers in the country. The aim of the PPG is to improve the quality of teachers in the country. Although PPG is only developed for the pre-service teachers, the results are expected to affect the quality of teachers in the future.

The study of Tweed and Som (2015) in Cambodia also presented how teachers' training in the country works. Accordingly, English language teacher training centers

were set up by the government to prepare English teachers and other teachers to teach not just the English language but also other subjects in lower secondary schools. Teachers can also take English as their major for their classroom teaching as English is currently taught in primary and secondary Cambodian schools (Tweed & Som, 2015). Furthermore, teacher trainees can also take courses to enhance their classroom teaching skills and/or improve their English language proficiency (Tweed & Som, 2015). This is what happened to the in-service teachers in Myanmar. They received teacher training program that focuses on enhancing their teaching skills and strategies and at the same time, they also got to attend training sessions to improve their English language proficiency (Ulla, 2018). It was reported that most of the teachers in Myanmar held a positive perception with regards to teacher training and English language proficiency program in the country (Ulla, 2017).

Teacher Professional Development: In-service and Pre-service Training

Students learning are always linked to the capacity of the teachers to teach the lessons in the classrooms. If a student performs poorly in his or her academics, teachers are always put to blame. In other words, teachers' teaching practices will either result in the improvement or failure in students' learning (Coe, Aloisi, Higgins, & Major, 2014; Mizell, 2010; Simon, 2013; Wenglinsky, 2001). Mizell (2010) mentioned that teaching quality was the most important factor in raising student achievement.

If the teacher is not qualified or has not gone to update his teaching skills in any professional development courses, training programs, and seminars, the quality of his or her teaching may be at stake that often leads to ineffective teaching and students' failure. Mizell (2010) also added that for teachers to be as effective as possible, they should continually expand their knowledge and skills to implement the best educational practices. These practices in teaching can only be obtained through attending various professional development courses and training programs. Teachers are not only trained and updated as to the different teaching strategies, but they also share best practices in the classroom teaching (Ulla, Barrera, & Acompanado, 2017). For Simon (2013), teacher training is another important area for faculty development; without an adequate capability to train teachers for education, the pipeline for feeding qualified, well-prepared students into the country's university system will be relatively sparse. Sunday (2015) also disclosed that teachers were crucial inputs of an educational system. The real growth of the education in the country is directed to the teaching profession having qualified, well-trained, and experienced teachers.

Admittedly, for some in-service teachers, especially those who are teaching in the remote areas, access to various training programs and other professional developments is limited. Therefore, the knowledge and skills in teaching should always be emphasized before taking up the teaching work. In other words, pre-service

teacher training must be held for and attended by teachers to be prepared for the teaching profession. Pre-service training would be a good avenue for teachers to practice and acquire good and effective teaching skills. A number of studies (El Kadri & Roth, 2015; Johnson, 2015; Kabilan, 2013; Lingam, Lingam, & Raghuwaiya, 2014) pointed out that pre-service teacher training is indeed needed in the teacher education curriculum as it prepares teachers to become qualified for the teaching profession.

Lingam et al. (2014) suggested that teacher education institutions needed to undertake the school practicum component of the teacher preparation program more authentically to ensure trainee teachers found field-based experiences fruitful and rewarding in terms of their professional preparation. Practicum experience for incoming teachers provide them the hands-on experience in teaching and the chance to be supervised by the seasoned teachers. According to Johnson (2015), a pre-service teacher is expected to learn from his or her mentor teacher, as the mentor teacher serves as a role model, modeling teaching abilities for the pre-service teacher. Likewise, Kabilan (2103) mentioned that pre-service teachers showed signs of maturity – personally and professionally. Aside from the fact that they get exposure to the real teaching profession, they will get to understand the culture and context in which they are working. As a result, teachers emerged as professionally ready after the practicum experience.

El Kadri and Roth (2015) in their study stated that the teaching practicum was often considered as a compulsory activity for enculturating new members into the teacher community by providing opportunities to experience teaching in action. However, the practicum is rarely conceptualized in terms of its transformative potential. Furthermore, they revealed in their study that the practicum does not have to be a mere induction experience but that it also may be the transformative locus for (a) the practicum participants (new teachers, school teachers, teacher educator and students) and (b) school and university/school relationships, and (c) of the practicum activity itself.

Studies of teachers' perceptions regarding teachers' training program were also conducted by Ha, Lee, Chan and Sum (2004), and Lingam (2012). The study of Ha et al. (2004) was conducted to determine whether the in-service training program was effective. With a total of 183 primary teachers in Hong Kong, the findings revealed that participants perceived the importance of the training. The findings also showed that the training was effective and practical for the teachers and for the curriculum. Lingam (2012) also made the same study to 33 beginning teachers at Vanuatu Institute of Teacher Education. The researcher found that the beginning teachers had positive perceptions about the training program they received. The participants also mentioned some concerns that they considered being needing improvement. Among these concerns include "multi-class teaching, school practicum, school administration, the relevance of some of the

courses, duration of the training program and program upgrading, learning environment, staff responsibility, and research."

The present study deals with Thai primary teachers' beliefs, needs, and challenges with regards to teachers' training program in the country. However, none of the studies above concentrated on what this study is focusing on; and none of them included Thailand and its teacher training program in their studies since they focused only in their own countries and localities. Thus, it is the purpose of this paper to bridge the gap between the cited studies and the lack of available literature pertaining to teachers' training beliefs, needs, and challenges in Thailand. It is hoped that the result of this study would shed light for more teachers' training programs in Thailand and in the ASEAN region in general, and to help teachers to become well prepared and well equipped with different teaching methodologies for their students to benefit.

Research Questions

1. What are the perceptions and beliefs of Thai primary teachers with regards to teachers' training program in Thailand?

2. What are the primary teachers' needs and expectations in the teachers' training program?

3. What are the challenges and difficulties faced by these primary teachers in applying their learned teaching methodologies in their own classroom teaching?

METHODS

This is a qualitative study where an in-depth interview was employed. Although the study made use of some numerical data (in the questionnaire) to tabulate the teachers' perceptions with regards to teacher training, these data were only used as the basis for the descriptive analysis of the findings.

Participants

A total of 22 (4 males and 18 females) primary school Thai teachers voluntarily participated in a 10-hour teacher's training program conducted by a university in Thailand as part of its community outreach program. These primary school teachers, whose ages were in between 35 to 50 years, were teaching in two different primary schools in Thailand. With teaching experiences from 11 to 26 years, all of these teachers were teaching different subjects for Anuban (Kindergarten) and Prathom 1–6 (Elementary first to sixth grades). None of these teachers had a Master's and or Ph.D. degree.

Research Tools

A modified questionnaire that was adapted from the Uintah Basin Teaching American History (UB-TAH) Project was used in the study to identify and describe the perceptions, expectations, and beliefs of the primary Thai school teachers regarding the training programs in the country. It was modified to better fit in the Thai primary school teachers' context. Furthermore, the questionnaire, which was written both in English and in Thai had two parts: part

one was on the demographic profile of the respondents, and part two was the items on teacher's perceptions, expectations, and beliefs regarding the training program. It made use of a Likert-type scale to code the responses of the participants in the questionnaire. Likewise, two semi-structured interviews were conducted. One group interview, which lasted for an hour, was held after the training program. The purpose of which was to delve deeper into the minds of the primary teachers whether their needs, expectations, and beliefs on teachers' training programs were met. Another individual interview with five teachers (since only five were available at the time of the visit) was done 2 months after the training program. The purpose was to know and identify whether the learned teaching strategies were applied in the classroom teaching, and whether there were challenges and/or problems met in applying those teaching strategies in the classroom.

Research Procedure

The researcher visited the two primary schools in Thailand and had informed the schools' heads about the conduct of the teachers' training, its purpose, and objectives. It was explained to the schools heads that teachers' participation both in the training program and the research is voluntary. One consideration in choosing the participants for the teachers' training program is the proximity of their schools to the university from where the researcher was teaching. Teachers were also informed about the training program, the research and

its focus that was centered on delivering and sharing interactive activities, child-centered strategies, and real, authentic tasks that can be used in the classroom.

At the end of the training session, teachers were given the questionnaire to answer and group interview was conducted. The researcher invited a local teacher who can speak well in English to help in the interview. She translated some of the questions and answers in the interviews. Transcription and analysis of the data followed. After 2 months from the training, the researcher visited the two schools and interviewed the teachers who were free at the time of the visit. Questions relating to the use of the teaching strategies they learned from the session, and the difficulties they encountered in applying them in the classrooms were also asked. Final analysis of the findings was done after the visit.

RESULTS

Questionnaire Findings

For the purpose of presentation, the percentages obtained from *strongly agree* and *agree* were combined against *strongly disagree* and *disagree*, and *neutral*.

Table 1 shows the percentage distribution of the items asked in the questionnaire with regards to primary school Thai teachers' perceptions, beliefs, and expectations in the teachers' training program.

From the results in Table 1, it can be said that most of the respondents strongly agreed in most of the items in the questionnaire. For example, all of the respondents said that the teachers' training program is helpful in their

Table 1

The frequency and percentage distribution of primary school Thai teachers' beliefs, expectations and needs in the teachers' training program in Thailand

Statements	Strongly Agree/Agree (n-22)	Neutral (n-22)	Strongly Disagree/ Disagree (n-22)
The information provided in this training **will**			
1. Add to the content knowledge you had prior to this class.	86.37%	13.63%	0
2. 'Inspire' you to seek additional information about this topic or similar topics.	68.18%	31.82%	0
3. Be relevant to what you should be teaching to your students.	90.91%	9.09%	0
4. Be helpful in your classroom teaching.	100%	0	0
5. Have a positive impact on your teaching career.	100%	0	0
The teaching method that will be taught/emphasized in this training… 6. Should be described well by the instructor.	100%	0	0
7. Should be demonstrated and/or modeled well by the instructor.	100%	0	0
8. Complements and/or supplements your existing teaching style.	100%	0	0
9. Can be used in your own classroom teaching.	100%	0	
10. Should be relevant to the learning styles of the Thai students.	100%	0	0
After the training program, I am expected to be… 11. Confident in my ability to develop lesson plans using the materials in the training program.	68.18%	22.73%	9.09%
12. Likely to integrate this knowledge into my classroom instruction.	54.54%	31.82%	13.64%
13. Confident to have adequate skill to use these teaching strategies in my class.	45.45%	22.73%	31.82%
14. Able to develop varied teaching and learning methods suitable to my students' needs.	77.27%	13.64%	9.09%
15. Able to create an effective learning environment for my students.	90.91%	9.09%	0
This training will improve my ability to… 16 Engage students in active learning by using strategies that work.	86.36%	13.64%	0
17. Integrate local and national (including online/websites) resources/archives, programs, and initiatives into classroom instruction.	13.64%	9.09%	77.27%
18. Collaborate with other teachers to develop and implement the curriculum with student-centered activities.	90.91%	9.09%	0
19. Create an effective learning environment which supports the learning process	100%	0	0
20. Incorporate information technology in various learning situations.	22.73%	9.09%	68.18%

classroom teaching and can have a positive impact on their teaching career. While there were teachers who neither disagree nor agree that teachers' training can inspire them to seek additional information, there were still teachers who perceived that teacher training can add to the content knowledge they had regarding their classroom-teaching strategies and methodologies. Furthermore, all primary teachers also expected that the teaching methods that would be taught and emphasized in the training program should be described, demonstrated, and/or modeled well by the trainer, and should be relevant to the learning styles of their students. They also expected that the teaching methods would complement and/or supplement their existing teaching style, and can be used in their own classroom teaching.

It can also be noted from Table 1 that some of the respondents had disagreed on some of the expectations regarding the outcome of the teachers' training program. For example, 9% of the participants revealed that they were not confident in their ability to develop lesson plans using the materials in the training program and to develop varied teaching and learning methods suitable to their students' needs. Also, almost 14% said that they were not likely to integrate this knowledge into their classroom instruction, while another 31.82% mentioned that they were not confident to have adequate skills to use these teaching strategies in their classes. Despite this disagreement, still, a greater number of participants had agreed to the above-mentioned items.

Generally, the participants believed that the training program would improve their ability to create an effective learning environment that supports the learning process, collaborate with other teachers to develop and implement the curriculum with student-centered activities, and engage students in active learning by using strategies that work.

Interview Findings

The sample excerpts from the teachers that were included in this section were translated into English.

Based on the interview conducted, the primary teachers thought that the training program was all lecture and discussion from the trainers. They never expected that it would be interactive and engaging. They revealed that most of the training programs they attended before were all series of lectures and no workshops and other engaging activities done. One teacher said,

"All the training programs that we attended before were all boring. Most of the time, the lecturers just talked and delivered the points without giving us activities to practice the strategies they introduced."

They also believed that teacher training programs were only for English teachers and all the teaching strategies introduced in the program could not be applied to any subject areas. One senior female teacher stated,

"Most of the teaching strategies and techniques that were introduced before were all made for English language teaching and for English

language teachers. The lecturers failed to make it applicable to other subjects."

Teachers' Training Needs

Based on the interview conducted, the respondents revealed the following training program needs that they want to have in the future training.

Engaging Workshops

The primary school teachers revealed that teachers' training that is activity based is what they want to attend in the future. According to them, the facilitator should engage them in workshops and activities so that they will have the real experience of what and how to conduct the teaching strategies in the real classroom context. They believed that they would easily learn and remember the teaching strategies if they would have the firsthand experience on how to do it in class. One of the teachers stated,

> *"There should be workshops and activities in the training programs so that we would be able to apply what we learned in the session."*

Simple but Relevant Teaching Strategies

Another teacher training needs that were suggested by the primary school teachers during the interview is the simplicity of the teaching strategies that would be taught to them. They revealed that since they were teaching the elementary students, activities and other child-centered teaching strategies

should be relevant to them and to their students. Thus, they wanted simple teaching strategies. Likewise, they also stated that activities that are included in the training program should match the ability of their students so that they would learn effectively.

When asked about the common teaching strategies they used in their classrooms, they mentioned the use of songs and rhymes, games, and lectures as the basic strategies they employed in their respective classrooms.

Challenges

In the school visit made after the training program, some of the teachers stated that they had tried using some teaching strategies they learned from the program. Others also revealed that they were still not using or have tried them.

Among the challenges that were mentioned during the interview were lack of teaching resources, the problem in the implementation of the new teaching strategies in the classroom, and a big number of students in the classroom. One of the male teachers revealed that lack of teaching resources posed as a big challenge for him in his classroom teaching. He revealed that information technology is scarcely available in his school, and that textbook is the only material and source in teaching. Sometimes, according to him, multimedia and other visual presentation equipment had to be shared with other teachers that whenever he needed it, he had to reserve it weeks before. He could not readily use them whenever he wanted to.

Another challenge that these primary teachers faced is the actual implementation of the child-centered strategies. In the individual interview, one female teacher stated that the problem in the child-centered strategies is that students are not used to them. She revealed that students felt hesitant to be put in groups, in pairs, and even in the class presentations. Students felt uncomfortable doing activities in class. Furthermore, she also revealed that conducting interactive activities with a large number of students would mean noise and disturbance to the other neighboring classes. For her, it is a challenge because she wanted her class to be interactive and enjoyable but at the same time, she did not want to receive complains from other teachers. Finally, she stated that she still would love to use the teaching strategies she got from the training program.

DISCUSSION

This present study tried to explore the primary Thai teachers' beliefs, needs, and challenges toward teachers' training program in the country. Based on the findings, although the Thai primary teachers had a positive perception regarding teachers' training program, their perceptions, beliefs, and expectations were shaped by their previous experience, attendance, and participation in the teachers' training program. For example, in the interview conducted, it was revealed that training programs, and seminars on teaching strategies and methodologies that these primary teachers attended before were all series of lectures and discussion; and

no workshops were made. These findings somehow give a picture of how a teacher training looks like in the country. From this, it is clear that previous training programs did not emphasize the engagement of teachers in all the activities in the sessions. It could be said that these training programs were just all about lectures and no hands-on activities were conducted for the trainees. Pokhrel and Behera (2016) mentioned in their study that lectures and discussions in the training sessions are prevalent that is why trainees want to have engaging activities. They also mentioned that trainees who attended to this kind of training program wanted to try something new to go beyond the normal practice. Group work, games, and other activities are the sample strategies that a facilitator can try in the session in order to keep the trainees motivated to participate in the program. The same findings were shown in the study of Mai Trang Vu and Thanh Pham (2014) when they found that learning by doing made the teachers satisfied with the training they attended. They also stated further that the teacher trainees appreciated it all the more when the trainers made them understand how each teaching strategy works in the classroom.

Another important result of the study is the lack of teaching resources, and some student-centered teaching methodologies are not applicable for some classrooms because of the big number of students in each class. These challenges faced by most of the teachers who participated in the teacher's training program only imply that there are a number of factors that deter the effective

application of teaching strategies in the class. Having a large class is impossible for teachers to try and arrange the class for an activity. Bahanshal (2013); Saejew (2013), and Weixuan (2014) noted that the issue on large classes was common among public schools in Southeast Asia that often led to students' inability to understand the given task set by their teachers. Thus, learning would never likely to take place in this kind of environment.

Finally, it can also be noted from the findings of the present study that these primary teachers prefer to attend some teachers' training programs that focus on workshops, deliver simple but relevant teaching strategies, and does not only cater for a specific academic subject but across disciplines. This gives a clear picture that most of the teachers' training conducted in the country centered only on the English language improvement for both teachers and students since most of the teaching strategies that were introduced were for English language teaching. It should be considered that a many of these teachers are not English teachers. The introduction of the different teaching strategies and methodologies should be modeled not just for teaching English language but to other academic subjects as well. It should be noted that primary teachers in the country teach most of the academic subjects. Thus, teaching strategies that do not only concentrate on one subject are better preferred by these primary teachers.

Limitations and Recommendations

The researcher was aware of the many limitations of this present study. This should be considered in order to provide suggested directions for future research. First, the number of primary school Thai teachers who were involved in the study was only limited to 22 since only these 22 primary school teachers were invited to a 10-hour teacher training program. Thus, future studies should double the number of respondents in order to get more data and details from the teachers. Second, the training conducted was only good for one and a half days, which was short to cover and introduce the different teaching strategies that are necessary for teaching. A 3-day training should be made in the future so as to engage the primary teachers more with the different student-centered teaching strategies. Third, the methodologies used in the study were survey questionnaire, individual and focus group interviews only. Future studies may include classroom teaching observation in order to describe further the classroom teaching skills and the methods and strategies that these teachers use in the classroom. Finally, the present study dealt only with the primary school Thai teachers as subjects of the research. High school and middle school teachers should be included to provide different perceptions regarding Thailand's teachers' training programs.

CONCLUSION

It is undebatable that indeed professional development of teachers through attending various conferences, training programs, and seminars can help teachers become more competent in the teaching profession. Mizell (2010) mentioned that effective and competent teachers would really have a positive impact and effect to their students. The knowledge and skills of the students will be improved and will eventually lead to their success when their teachers are actively and effectively attending various professional development sessions. These teachers should be updated in order to cope with the dynamic world of teaching. However, government and other institutions should also consider how the training should be delivered and what skills in teaching should be focused on. Thus, knowing the perceptions, beliefs, and needs of the teachers is essential to the success of all teachers' training program. This does not only identify the needs of the teachers, but it also opens for a great discussion on the challenges that these teachers face in the real classroom setting.

The present study that explored Thai teachers' perceptions, beliefs, and needs on teachers' training program in Thailand has implications for teacher education institutions, education officials, and education policy-makers who work and have been working for the improvement of teachers' professional and teaching skills not just in Thailand but also in the ASEAN region. First, any educational organizations and the Ministry of Education should consider that professional development of teachers is a significant contributor toward the success of the students. Thus, teachers' training programs should be trainee-centered and activity-based rather than lecture-based. In this way, these teachers will have the first experience of how should a certain teaching strategy be employed in the classroom. Second, introducing some teaching strategies to the teachers especially when these strategies are new to them should be modeled properly by a facilitator. A facilitator or a trainer should see to it that the teaching strategies employed in the training should be easily understood by the teacher-trainees so as to use them properly in their own classrooms. Likewise, these strategies should not only be limited and applicable for a certain subject area but can be used as well to other academic subjects. Finally, a professional development like training programs, seminars, and conferences should be made available and accessible for all teachers especially to those who are teaching in the far-flung areas in the country. If the government is keen on improving the education status of the country, teachers' needs should be considered and training opportunities should not only be selective to those teachers teaching in the urban areas.

REFERENCES

Bahanshal, D. (2013). The effect of large classes on English teaching and learning in Saudi Secondary Schools. *English Language Teaching, 6(*11), 49-59.

Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014). What makes great teaching? Review of the underpinning research. Retrieved December 1, 2017, from https://www.suttontrust.com/wp-content/uploads/2014/10/What-Makes-Great-Teaching-REPORT.pdf

Dudzik, D. L., & Ngoc Nguyen, T. (2015). Vietnam: Building english competency in preparation for ASEAN 2015. In R. Stroupe & K. Kimura (Eds.), *ASEAN Integration and the Role of English Language Teaching* (pp. 14–41). Cambodia: Phnom Penh, IDP Education.

Educational Testing Services (ETS). Retrieved April 15, 2016, from http://www.ets.org/research/policy_research_reports/toefl-sum-10

El Kadri, M. S., & Roth, W. M. (2015). The teaching practicum as a locus of multi-leveled, school-based transformation. *Teaching Education, 26*, 17–37. Retrieved May 18, 2016, from http://web.uvic.ca/~mroth/PREPRINTS/teachingR.pdf

English for Education College Trainers (EfECT Handbook). (2014). British Council, Myanmar.

Ha, A., Lee, J., Chan, D., & Sum, R. (2004). Teachers' perceptions of in-service teacher training to support curriculum change in physical education: The Hong Kong experience. *Sport Education and Society, 9*(3), 421–438.

Haji-Othman, N. A., & Sharbawi, S. (2015). Brunei's role in ASEAN integration: English language as capital. In R. Stroupe, & K. Kimura (Eds.), *ASEAN Integration and The Role of English Language Teaching* (pp. 14–41). Cambodia: Phnom Penh, IDP Education.

Hall, S. J. (2015). A past before a blueprint: Malaysia's challenges in English language teaching. In R.

Stroupe, & K. Kimura (Eds.), *ASEAN Integration and the Role of English Language Teaching* (pp. 122–149). Cambodia: Phnom Penh, IDP Education.

Hickey, M. (2014). English for ASEAN! African and Asian Teacher Migration in response to Thailand's English-language Education Boom. Retrieved April 15, 2016, https://asian.washington.edu/events/2014-01-15/english-asean-african-and-asian- teacher-migration-response-thailands-english

Jamil, H., Abd Razak, N., Raju, R., & Mohamed, A. R. (2011). Teacher professional development in Malaysia: Issues and challenges. *In Africa-Asia University Dialogue for Educational Development Report of the International Experience Sharing Seminar: Actual Status and Issues of Teacher Professional Development* (p.85–102). CICE Series 5. Hiroshima: Hiroshima University

Johnson, K.R. (2015). Fourth year teachers' perceptions of the student teaching practicum in Abu Dhabi (Doctoral's dissertation), Walden University, USA. Retrieved May 18, 2016, from http://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=2890&context=dissertations

Kabilan, M. K. (2013). A phenomenological study of an international teaching practicum: Pre-service teachers' experiences of professional development. *Teaching and Teacher Education, 36*, 198-209. doi:10.1016/j.tate.2013.07.013

Kaewmala. (2012). Thai education failures – Part 4: dismal English-language training. Retrieved October 5, 2017, from https://asiancorrespondent.com/2012/03/thai-education-failures-part-4-dismal-english-language-education/

Kongkerd, W. (2013). Teaching English in the era of English used as a lingua franca in Thailand. Retrieved October 5, 2017 from http://www.bu.ac.th/knowledgecenter/executive_journal/

oct_dec_13/pdf/aw01.pdf

Lingam, G. I. (2012). Beginning teachers' perceptions of their training programme. *Scientific Research, 3*(4), 439–447. doi:10.4236/ce.2012.34068

Lingam, G. Lingam, N., & Raghuwaiya, K. (2014). Professional development of pre-service teachers: the case of practicum experience. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering, 8*(7). Retrieved May 18, 2016, from http://waset.org/publications/9998738/professional- development-of-pre-service-teachers-the-case-of-practicum-experience

Mai Trang Vu, M., & Thanh Pham, T. T. (2014). Training of trainers for primary English teachers in Viet Nam: Stakeholder evaluation. *The Journal of Asia TEFL, 11*(4), 89–108.

Mizell, H. (2010). Why professional development matters. Retrieved May 18, 2016, http://learningforward.org/docs/pdf/why_pd_matters_web.pdf?sfvrsn=0

Nguyen C. T. (2015). Training high qualified teachers in Vietnam: Challenges and policy Issues. http://aadcice.hiroshima-u.ac.jp/e/publications/sosho4_2-16.pdf

Nguyen, T. P., & Thuy P. P. (2015). Innovation in English language education in Vietnam for ASEAN 2015 integration: Current issues, challenges, opportunities, investments, and solutions. In R. Stroupe, & K. Kimura (Eds.), *ASEAN Integration and the Role of English Language Teaching* (pp. 89–104). Cambodia: Phnom Penh, IDP Education.

Pokhrel, T. R., & Behera, S. K. (2016). Expectations of teachers from teachers professional development program in Nepal. *American Journal of Educational Research, 4*(2),190–194. http://pubs.sciepub.com/education/4/2/6.

Saejew, B. (2013). Opinions on English teaching large classes as perceived by English teachers at Burapha University. In *The Asian Conference on Language Learning*, Osaka, Japan. Retrieved May 18, 2016, from http://iafor.org/archives/offprints/acll2013-

Simpson, J. (2011). Integrating project-based learning in an English language tourism classroom in a Thai university (Doctoral Dissertation, Australian Catholic University, Sydney, Australia). Retrieved May 18, 2016, from http://dlibrary.acu.edu.au/digitaltheses/public/adt-acuvp309.29062011/02whole.pdf

Steadman, J. (2008). Teacher training: Systemic issues and challenges. *ZOA issue paper no.3*. Mae Sot, Thailand: ZOA Refugee Care Thailand. Retrieved March 15, 2015, from   http://www.burmalibrary.org/docs12/ZOA-Issue_paper_No_3-Steadman.pdf

Sunday, A. F. (2015). Management of teacher education in Nigeria: Issues, problems and remedies. http://www.deta.up.ac.za/archive2007/presentations/word/Management%20of%20teacher%20education%20in%20Nigeria%20Issues%20and%20problems%20%20%20Akinwumi%20Femi%20Sunday.pdf

Supriatna, A. (2015). Indonesia's issues and challenges on teacher professional development. http://aadcice.hiroshima-u.ac.jp/e/publications/sosho4_2-04.pdf

Tweed, A. D., & Som, M. (2015). English language education in Cambodia and international support ahead of ASEAN integration. In R. Stroupe, & K. Kimura   (Eds.), *ASEAN integration and the role of English language teaching* (pp. 89–104). Cambodia: Phnom Penh, IDP Education.

Ulla, M. B. (2016). Pre-service teacher training programs in the Philippines: The student-teachers practicum teaching experience. *EFL Journal, 1*(3), 235-250. doi:10.21462/eflj.v1i3.23

Ulla, M. B. (2017). Teacher training in Myanmar: Teachers' perceptions and implications.

International Journal of Instruction, 10(2), 103–118. doi:12973/iji.2017.1027a

Ulla, M. B. (2018). In-service teachers' training: The case of university teachers in Yangon, Myanmar. *Australian Journal of Teacher Education, 43*(1), 66-77.

Ulla, M. B., Barrera, K. B., & Acompanado, M. M. (2017). Philippine classroom teachers as researchers: teachers' perceptions, motivations, and challenges. *Australian Journal of Teacher Education, 42*(11), 52. doi:10.14221/ajte.2017v42n11.4

Weixuan, Z. (2014). A brief analysis of large classroom's English teaching management skills. *SHS Web of Conferences 7*, 02002. doi:10.1051/shsconf/2014.0702002

Wenglinsky, H. (2001). *Teacher classroom practices and student performance: How Schools can make a difference*. (Research Report RR-01-19). Princeton, NJ: Educational Testing Service.

Widiati, U., & Hayati, N. (2015). Teacher professional education in Indonesia and ASEAN 2015: Lessons learned from English language teacher education programs. In R. Stroupe, & K. Kimura (Eds.), *ASEAN Integration and the Role of English Language Teaching* (pp. 105–121). Cambodia: Phnom Penh, IDP Education.

The Relationship between Emotional Intelligence and Burnout among EFL Teachers Teaching at Private Institutions

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ABSTRACT

This study explored EFL teachers' emotional intelligence and their burnout in private language institutes in one city in Iran. This study also identified the emotional intelligence sub-categories that contribute mostly to burnout. To this end, the researchers administered the Bar On's EQ-I Self Report Scale questionnaire along with the Maslach Burnout Inventory to a sample of 63 Iranian teachers of English language in 11 private EFL institutes. Pearson correlation, multi-variable regression analysis, and two independent samples *t*-tests were run. The results revealed a significant relationship between teachers' emotional intelligence and the three dimensions of burnout (emotional exhaustion, depersonalization and personal accomplishment). The results also showed that categories of general mood and adaptability are the best predictors of teachers' burnout.

Keywords: Emotional intelligence; burnout; EFL teachers; private language centers

INTRODUCTION

In todays' technologically interconnected world, having a happy life depends greatly on one's satisfaction with different aspects of life, particularly, at the workplace.

Individuals spend half of their time in their workplace, so the role of emotion as an effective factor, which can be a predictor of one's performance in a workplace, is undeniable. Along with the development of Emotional Intelligence (hereafter EI) and its influence on human life, most companies have realized the importance and crucial role of EI in their organization's management. On the other hand, some studies (Mohammadyfar, Khan, & Tamini, 2009) revealed destructive effects of burnout and its reverse relation with EI. So, the crucial role of EI in order for employees

to achieve better performance became so obvious that it is believed that EI could lead to success, strong personal relationships, high responsibility and more collaboration among employees.

Many surveys have been conducted in the teaching profession to study the main area in which teachers encounter difficulties, either in classrooms or their personal lives. Results of these studies revealed various problems in different aspects including physical, economical, sociological, and psychological ones (Borzaga & Tortia, 2006; Kim, 2004; Wright & Davis, 2003). Among these, psychological aspects are influential factors that have more impact on life satisfaction of teachers comparing to physical, economical and sociological items. Among variant psychological factors, depression, self-esteem, self-achievement, and participation in leisure activities are directly related to one's level of satisfaction or dissatisfaction (Schutte & Malouff, 2011).

Elt Trends in Iran

Recognized as an international language of communication, English was given specific attention by Iranians around the beginning of 21st century (Ashrafzadeh & Sayadian, 2015). This time in Iranian history was concurrent with economic privatization as a part of marketization which among many other factors resulted in the national curriculum reform and the opening of many private language institutes. In terms of the former, however, Davari and Aghagolzadeh (2015) believed that the public education system was doomed to failure due to its

traditional teacher-centered approach which utilized a grammar-translation method. This claim was further supported by Pazhouhesh (2014) who reported that state-run schools in Iran operated with teacher-centered instruction, followed a more top-down pedagogic theory and practice and still emphasized on form-focused practices in which teachers had isolated themselves from "the realities of the classroom dynamic" (p. 44). In contrast, teachers at privately-operated language institutes, Pazhouhesh (2014) reported, were more open to change and adopted a more liberal role. Moreover, they were less obliged to stick to the syllabuses and adopted Communicative Language Teaching (CLT) approaches by using American ELT textbooks such as *American File, Top Notch*, and *New Interchange Series*. In constrast, state-run schools have not been successful in meeting Iranian students' ever-increasing desire to learn English communicatively (Davari, 2014). On the other hand, private institutions have been extremely successful at offering English language at different levels in their curriculum, leading to popularity of private language institutions. According to Zandian (2015), "English seems to have found its way smoothly right to the heart of Iranian society, proving itself to be a necessity, rather than a mere school subject" (p. 113).

However, the fact that EFL teachers at Iranian private institutions are not permanently employed, leading to less job security, is considered as a downside factor. Although one must be careful in generalizing the teachers' dissatisfaction

to every country and all cultural contexts, in Iran, EFL teachers who work at private institutions, reportedly have low income but heavy workloads. Hence, they are less motivated and are less satisfied professionally (Hekmatzadeh, Khojasteh, & Shokrpour, 2016; Pishghadam & Sahebjam, 2012). When this occurs, it is not surprising that unhappy teachers are less capable of doing their expected job.

Nevertheless, the extant literature reveals that the emotional workload of teachers has been mostly ignored. Wang, Lan, Li and Wang (2002) reported that many teachers all over the world are so unhappy in their profession that they consider leaving within their first five years of employment. This vocational unhappiness, in the long run, can turn to long-term occupational stress, especially among human service workers such as teachers (Jennett, Harris, & Mesibov, 2003).

In a nutshell, considering the place private institutions fill in Iran or perhaps many other similar countries, and a great number of language learners who attend these institutions to fulfill their dreams, it is vital to study the relationship between private teachers' EI and burnout. This is also because teachers' physical and emotional well-being have a direct relationship with students' learning, health and wellbeing (McCallum & Price, 2012).

Research Questions

With regard to the nature of the study, the researchers raised the following questions:

1. Is there any significant relationship between Iranian EFL teachers' emotional intelligence and burnout?

2. Which emotional intelligence sub-categories mostly contribute to burnout?

LITERATURE REVIEW

Emotional Intelligence (EI hereafter) is related to psychological wellbeing and in turn can have an impact on one's job satisfaction. EI is defined as an ability to realize one's emotions as well as others' emotional feelings such as customers or students. Mayer, Salovey and Caruso (2004) considered this ability as a useful tool for employees who dealt with job stress. Furthermore, it is a way to retain psychological health. It is generally believed that emotionally intelligent teachers, who try to develop their relationships with others while teaching, can help their students' achievement (Kremenitzer & Miller, 2008). Some people seem to be more tolerable in everyday stress, while others break down under stress load which is an indicator of individuals' emotional difference. According to Platsidou (2010), high level of EI reduced stress level, resulting in less burnout. As Slaski and Cartwright (2002) argued, stress was a cause of negative feelings like threat, danger, or challenge. In the workplace, specifically, burnout has been positively

linked to the challenging demands that employees need to fulfill (Crawford, LePine & Rich, 2010).

Burnout refers to the feeling of exhaustion, resulting from extensive usage of one's energy, strength, and resources (Freduenberger, 1974). Maslach, the first person who worked on burnout empirically, stated that it was an emotional exhaustion which was brought about because of stress from interpersonal contacts. Studies on burnout show that burnout is not a one-night phenomenon; that is, it is created gradually. As Maslach and Leiter (1997) asserted, burnout was a feeling of illness which was created gradually as the time passes due to one's psychological depression.

Freudenberger (1974) further defined the concept as a process of getting fed up with needs of energy, power and resource. According to Maslach and Jackson (1981), burnout was a psychological syndrome referring to emotional draining, depersonalization and low personal adjustment which may occur among people who interacted with others in some social roles. Many studies demonstrate the negative impact of burnout syndrome on productivity, work effectiveness, quality of life and health (Maslach & Leiter, 1997). According to Maslach and Leiter (1996), "burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity" (p.14). In the past, it was believed that burnout is limited to human services such as, social work, legal services

and police work. However, in the 1980's, researchers and practitioners recognized a wider area in which burnout has occurred such as managers, entrepreneurs and teachers (Maslach & Leiter, 1997).

Models of Emotional Intelligence

Researchers have presented different models for EI in accordance to its progress in different areas of human life. According to Mayer, Salovery & Caruso (2004), models of EI could be generally categorized into three main theoretical approaches including: 1) 'ability' models, that defined EI as a conceptually related set of mental abilities to do with emotions and the processing of emotional information (e.g., Mayer & Salovey, 1997); 2) 'trait' models, defining EI as an array of socio-emotional traits, such as assertiveness (e.g., Bar-On, 1997); and 3) competency models comprising a set of emotional competencies defined as learned capabilities based on EI (e.g., Goleman, 2001). Although these categories are useful in that they help to clarify the different approaches to the conceptualization of the construct, they also serve to suggest that approaches to EI are unrelated and more disparate than they may actually be as Goleman (2005) pointed out "…the proposed division may have the unintended effect of obscuring important connections between aspects of emotional intelligence" (Goleman, 2005, p. 1).

Mayer and Salovey as the prominent researchers in this field proposed the mental ability model. In their model, the focus is on processing affective information.

According to Mayer and Salovey (1997), emotional intelligence was "the ability to monitor one's own and other' emotions and feelings, to discriminate among them, and to use this information to guide one's thinking and actions" (p.185). Mayer and Salovey (1997) proposed the following traits for their mental ability model: (1) perception, evaluation, and expression of senses; (2) making thinking facile with regard to one's emotions; (3) perceiving and closely studying emotional information, and finally (4) emotional management.

Emotional intelligence is conceptualized by Salovey and Mayer (1990) as a set of abilities to do with emotions and the processing of emotional information. These included the capacity to identify and express emotions, the capacity to effectively regulate and manage emotions and the capacity to utilize or reason with emotions (Salovey & Mayer, 1990). Within this framework, Salovey and Mayer (1990) proposed that individuals differed in these abilities, and that these differences were potentially important because: (a) emotional abilities might account for variance in important life criteria such as psychological well-being, life satisfaction, and the quality of interpersonal relationships; and (b) such differences underpinned skills that could possibly be learned or taught. Daniel Goleman paid attention to the second notion and wrote a popular book that placed particular emphasis on the links between EI and important life criteria. Goleman's (1995) book "Emotional Intelligence: why it can matter more than IQ" generated a considerable amount of interest in EI, quickly becoming the most widely read social science book in the world. With this influence, a number of alternative models of EI were developed providing several theoretical frameworks for conceptualizing and measuring the construct (Goleman, 2001).

Other scholars who presented a model for this concept are Bar On and Goleman. They are also outstanding experts in the EI arena. They both introduced mixed models, variant in some facets. In Goleman's mixed model of EI, there are five components including: awareness of one's emotions, management of emotions, impelling oneself, identification of emotions in others, and coping with relationship. Bar On's (1995) model of EI is known as a mixed model since "it mixes emotional intelligence as an ability with social competencies, traits, and behaviors, and make wondrous about the success this intelligence leads to" (Mayer & Cobb, 2000, p.171). Thus, this model highlights multiple aspects of personal functioning. Since most of the discussion in the present study draws on Bar-On's (1995) conception of EI, the way in which his main scales and subscales are categorized is presented in Table 1.

Some main distinctions exist between the mental ability model and the mixed model. To name a few, in a mixed model, EI assessment is gained through self-report protocols, known as Emotional Quotient. In the mental ability model, EI is assessed through an objective performance test. Other differences exist in scoring of

Table 1

Main scales and subscales of EI based on the Bar-On's EI model (1995)

Main Scales of EI	Subscales of EI
Intrapersonal skills	self-regard, emotional self-awareness, assertiveness, independence, and self-actualization
Interpersonal skills	empathy, social responsibility, and interpersonal relationships
Adaptability	reality testing, flexibility, and problem solving
Stress management	stress tolerance and impulse control
General mood	optimism and happiness

scales, reliability of scales, convergent and divergent validity, and predictive validity and so on. As the last difference mentioned here, Bar On (1997)'s mixed model EI contains prevalent notions. In addition, this model is very practical for a large number of studies as both performance and achievement have been considered. Based on the aforementioned reasons, the model used for this study is Bar On (1997)'s mixed model which describes a cross-section of interrelated emotional and social competencies.

Empirical Studies

Even though several studies in literature have been carried out with the aim of examining EI and burnout, the studies that examined the possible relationship between these two concepts are very few. Salovey, Bedell, Detweiler and Mayer (2000) conducted a study on emotional intelligence. They found that people with the ability to manage their emotional conditions were healthier as they "accurately perceive and appraise their emotional states, know how and when to expresses their feelings and can effectively regulate their mood states" (p.161). This supports the idea that there

is a direct relation between EI skills and physical and psychological health (Schutte & Malouff, 2011). Accordingly, Amdurer, Boyatzis, Saatcioglu, Smith and Taylor (2014) stated that emotionally intelligent people were able to adapt themselves with life's problems; moreover, they had the ability to manage their emotions in the best possible way. In the same vein, Harrod and Scheer (2005) asserted that EI was a tool which pushed through factors influencing personal achievement and better relationship with others.

Regarding EI and its relation with teachers, Mortiboys (2005) reported that teachers with high EQ (Emotional Quotient) could understand students' emotions. In addition, they have a positive behavior toward students making them more competent to help their students in their learning process. EI is a useful devise, which enables teachers to learn about the students and familiarize themselves with them, resulting in more sensitivity to students demands (Chang, 2009).

Aslan and Ozata (2008); Gullue (2006) also found that there was an adverse relation between EI and burnout; in other words, increase in one of them leads to reduction

in another one. According to Chang (2009), various emotional resources were essential to avoid burnout. Moreover, in a study carried out by Gohm, Grant, Croser and Dalsky (2005), EI was shown to be related to lower levels of stress.

In a more recent study, Hekmatzadeh, Khojasteh and Shokrpour (2016) investigated the relationship between EI and job satisfaction of EFL teachers who worked at private language institutes in Iran/Shiraz. This study also tried to answer whether there is a significant difference between EI and job satisfaction of Iranian EFL teachers in terms of gender. The results showed that there was a positive and significant correlation between EI and job satisfaction of EFL teachers in Iran/Shiraz. The results further showed that there was a statistically significant difference in EI between EFL male and female teachers, but there was no statistically significant relationship between Iranian EFL teachers' job satisfaction in terms of gender.

In another study conducted by Vlachou, Damigos, Lyrakos, Chanopoulos, Kosmidis and Karavis (2016), the researchers investigated the relationship between burnout and EI among professional healthcare workers. The results indicated a positive correlation between the two variables with the note that EI acted protectively against burnout.

Many other studies, such as Moafin and Ghanizade (2009); Mortiboys (2005) had revealed that there was a positive relationship between EI and self-efficacy. A number of studies revealed no significant

relationship between EI trait measures and burnout phenomenon. For example, in De vito (2009)'s study, the result showed no significant difference between EI and burnout. Inconsistency of the result of this study with many other relevant studies might be due to its small sample size along with the participants of this study who were all female studying at the Master level. Furthermore, for this specific study, convenient rather than random sampling was adopted which could affect the generalizability of this finding to a larger group. Another study which supports the result of the aforementioned study was carried out by Thornqvist (2011) at a rural public school district in southwest Florida. One feature this study shares with the previous study is its sampling method. In this study too, convenient sampling was adopted by the researcher and only involved the participation of four elementary schools. Therefore, we can conclude that insignificant relations found between demographic variables with burnout and EI subscales may be due to the small sample size and the homogeneity of the participants involved in the study.

Accordingly, inconsistencies exist in the results provided in the literature. Some studies found relationship between EI and burnout, while some other studies rejected any relationship between the two concepts. Furthermore, those studies which have been carried out in many countries just considered EFL school teachers (e.g., Vaezi & Fallah, 2011). Considering teachers' exposure to a number of problems, such as low payment, lack of insurance and lack of job security

in private language institutes, it is essential to carry out a comprehensive research on the relationship between EI and burnout of private language institute EFL teachers.

METHODS

Design

This study was in fact a correlational research since it detected a possible relationship between EI and burnout. It should be, therefore, noted that even though a mere correlation is not able to reasonably determine causation, "high correlation values should suggest causal relationships" (Barr, Kamil, Mosenthal, & Pearson, 2002, p. 48). To have more reliable data, other experimental means have to be used to verify such suggested relationships (Barr et al., 2002). To this end and based on the nature of the study, a quantitative approach was then followed to determine the extent of the correlation between study variables, EI and burnout. To clarify further, the instruments used in this study are two questionnaires with five-point Likert scale and seven-point Likert scale; therefore, the data are purely quantitative that make it necessary to apply quantitative approach. Moreover, this study aimed to obtain quantifiable information in numerical form to examine the relationships by statistics that led the researchers to follow a quantitative design.

Participants

In selecting participants, as the first step, a random sampling method was utilized to collect the data from private EFL institutes in one city in Iran. The researchers selected the participants of the study from 11 private institutes. These institutes were the sources for collecting the data from 63 male and female EFL teachers (30 male and 33 female teachers) with a range of different marital status, educational background, and teaching experience. The participants' age ranged between 32 and 50 years and their teaching experience ranged from 10-15 years. To select the samples, the researchers employed the fish and ball technique and assigned a unique number to each one of the teachers in 11 available private institutes. After that, the required number of samples were randomly selected (Krejcie & Morgan, 1970). The teachers selected based on their unique number were then contacted. The researchers explained the objectives and purposes of the study and what the teachers were expected to do. After getting their consent, they were added to the samples of the study. The following table shows the final number of teachers in the study sample.

The researchers adhered to the ethics in

Table 2
Number and properties of EFL teachers in the study sample

Male	Female	Age (years)	Single	Married	Years of teaching	Total
30	33	32-50	45	18	10-15	63

conducting quantitative research. The ethical procedures involved obtaining informed consent, collecting sensitive information, confidentiality versus disclosure of harm and mental capacity act and inclusivity. In questionnaire translation, the researchers paid attention to using neutral language and maintaining privacy along with using words, which reduce embarrassment in answering the questions. They also tried to avoid the use of any word which may upset the participants.

There are some basic reasons why only EFL teachers who teach at private language institutions rather than those who teach at high schools were chosen in the current study. Indeed, EFL teachers who teach at private language institutions encounter some unremitting problems which may impact their teaching outcomes, resulting in their job related burnout (Hekmatzadeh, Khojasteh, & Shokrpour, 2016). For instance, they are employed temporarily and not permanently; they usually have low payment, they lack job insurance, they do not have job security; consequently, their outcomes vary from one term to another.

Moreover, there is no competition among teachers to attract more students since education in public schools is free; in contrast, there is stiff competition among private language institutions to employ better teachers and attract larger student enrolments (Pishghadam & Sahebjam, 2012). This may in turn intensify the problems with private institute teachers' job security, stress, and disappointment, resulting in their burnout. Thus, private

institution teachers were selected based on the supposition that more reliable data would be gained regarding the relationship between their EI and burnout as a result of the above mentioned issues.

Instruments

The first instrument used in this study was Bar On EQ-I Self Report Scale. This scale, according to Bar-On (2000), "has the capacity to assess individual's general degree of EI, potential for emotional health, and present psychological well-being" (p.1). This model of EI was mainly developed in order to answer the question, "Why are some individuals more able to succeed in life than others?" (Bar On, 1997, p. 35). Bar-On's EQ provided us with five composite scores drawn out of the 15 sub-categories. Intrapersonal, Interpersonal, Adaptability, Stress management, and General mood were the ones which provided composite scores. Self-regard or self-esteem, emotional self-awareness, assertiveness, independence, self-actualization, empathy, interpersonal relationship, social responsibility, stress tolerance, impulse control, reality testing, flexibility, problem solving, optimism, and happiness were the sub-scales which provided 15 sub-categories (Bar-On, 1997).

The scale consists of 90 questions which assess the teachers' emotional intelligence and applies a 5-point Likert scale, which ranges from 1= *highly satisfying* to 5= *highly dissatisfying* in the checklist form.

Since the researchers were not sure about the English proficiency level of English teachers who worked at private

language institutions, they decided to use the Persian version of the Bar-On questionnaire. This questionnaire had been translated to Persian by Hekmatzadeh, Khojasteh and Shokrpour (2016) and the validity and reliability of the Persian version of the questionnaire were examined via 30 teachers from private language institutions. According to this study, Cronbach's Alpha testing was utilized to determine the reliability and the result was 0.94 which is within the highly satisfactory range.

The second questionnaire used in this research was the Maslach Burnout Inventory (MBI, 1996) that has been in use for over 20 years. The questionnaire is used for measuring teachers' burnout on the three sub-scales consisted of 22 items including nine items for emotional exhaustion (1, 2, 3, 6, 8, 13, 14, 16, 20), five items for depersonalization (5, 10, 11, 15, 22), and eight items for reduced personal accomplishment (4, 7, 9, 12, 17, 18, 19, 21). The emotional exhaustion subscale (EE), is used to examine a feeling of emotional exhaustion by individuals' work demands. The depersonalization (DEP), on the other hand, measures an impersonal response toward recipients of one's care or service. Finally, the personal accomplishment subscale (PA) is related to assessment of a success feeling in work environment (Maslach, 1996). In this scale, participants responded a 7-point Likert scale, which ranges from 0 = *never* to 6 = *very much*. It should be noticed that individuals' high scores on emotional exhaustion and depersonalization subscale

and low scores on personal accomplishment subscale are signs of burnout in individuals.

As mentioned earlier, the researchers applied the Persian version of the MBI questionnaire to collect the required data. According to Eghtesadi Roudi (2011), the Persian version of MBI had revealed a good level of reliability and validity in Iran. According to this study, Cronbach's Alpha reliability coefficients ranged from 0.81 to 0.92 proving it to be highly satisfactory. As a result, the researchers used the Persian version of this questionnaire in the context of Iran. The number of the items was 22, the same as the English version.

Data Analysis Procedure

As the first step in analyzing, the data were entered into the SPSS version 19. As the next step, descriptive statistics including frequencies, means, and standard deviation were estimated. Since the collected data in the two questionnaires were in the form of Likert scale, numerical statistics (quantitative data) were then gained and used in the process of data analysis. To examine the relationship between EI and burnout and answer the first research question, Pearson correlation was used, and for investigation of common distribution, descriptive statistics were determined. The researchers conducted Multi-variable Regression analysis to identify the emotional intelligence sub-categories which mostly contribute to burnout.

RESULTS

At first, Kolmogorov-Simonov test was

applied to examine the normal distribution of data (Table 3). This normality was determined with the assumption that H0= normal data and H1 = abnormal data. Since the p-values for the variables of EQ (0.911) and Burnout (0.067) were greater than the alpha level (p-values = sig >0.05), H0 could not be rejected; thus, the data were

Table 3
Results for Kolmogorov-Smirnov test

Variable	N	Mean	Kolmogorov-Smirnov Z	Level of Significance
Emotional Quotient	63	330.17	0.562	0.911
Burnout	63	28.87	1.47	0.067

normal and due to the normality of data, the researchers used parametric tests.

Research Question 1

The first research questions asked, "Is there any significant relationship between Iranian EFL teachers' emotional intelligence and burnout?"

The first hypothesis of the study which was formulated based on the first research question predicted that there is no statistically significant relationship between Iranian EFL teachers' EI and burnout. In order to test this hypothesis, the researchers applied Pearson's correlation coefficient test

Table 4
Pearson correlation analysis between teachers' EQ and burnout

Variable		N	Pearson Correlation	Significance
Independent	Dependent	63	-0.582	0.000
Emotional Quotient	Burnout			

to analyze and interpret the data. Results of this test are shown in Table 4.

As shown in Table 4, the Sig. (two-tailed) value is 0.000, which is less than 0.05; hence, the correlation is significant. The r value, on the other hand, is negative (-0.582). As a result, it can be concluded that there is a statistically significant medium strength negative correlation between Iranian EFL teachers' EI and their burnout.

So we can conclude that when the amount of EQ increases (our first variable), the rate of burnout (our second variable) decreases. In other words, the higher the EFL teachers' EQ, the lower their burnout would be.

As depicted in Table 5, a weak but significant negative correlation ($r = -0.381$, -0.337, p value = 0.002, 0.007 <0.05) exists between the sub-scales of Intrapersonal EQ (emotional self-awareness, assertiveness,

Table 5
Pearson correlation analysis between EQ and burnout variables

Variables				
Independent	Dependent	*N*	Pearson Correlation	Significance
Emotional Quotient Component	Burnout Component			
	Emotional exhaustion	63	−0.381	0.002
Intrapersonal	depersonalization	63	−0.337	0.007
	Personal accomplishment	63	0.457	0
	Emotional exhaustion	63	−0.114	0.374
Interpersonal	depersonalization	63	−0.299	0.017
	Personal accomplishment	63	0.489	0
	Emotional exhaustion	63	−0.387	0.002
Adaptability	depersonalization	63	−0.362	0.004
	Personal accomplishment	63	0.585	0
	Emotional exhaustion	63	−0.439	0
Stress management	depersonalization	63	−0.285	0.024
	Personal accomplishment	63	0.365	0.003
	Emotional exhaustion	63	−0.439	0
General mood	depersonalization	63	−0.362	0.004
	Personal accomplishment	63	0.567	0

self-regard, self-actualization, and independence) and emotional exhaustion, and depersonalization as the two basic dimensions of burnout. This could mean that if the Intrapersonal EQ (emotional self-awareness, assertiveness, self-regard, self-actualization, and independence) subscales are improved in EFL teachers, their emotional exhaustion and depersonalization would decrease slightly. In other words, the higher EFL teachers' Intrapersonal EQ subscales, the less likely they are to experience emotional exhaustion and depersonalization in their profession.

In contrast, there is a medium strength and significant positive correlation (*r* = 0.457, & *p* value = 0.000<0.05) between the sub-scales of Intrapersonal EQ (emotional self-awareness, assertiveness, self-regard, self-actualization, and independence) and personal accomplishment as the third basic dimension of burnout. It means that if the EFL teachers improve the same variables of Intrapersonal EQ and its sub-scales, their personal accomplishment would increase with an average degree. In other words, the higher EFL teachers' Intrapersonal EQ subscales, the more likely they are to experience personal accomplishment in their job.

The second row of the above table further demonstrates significant results. As

a result of significant correlation depicted in Table 5, it could be noticed that while there is no significant relationship ($r = -0.114$, & p value = 0.374>0.05) between sub-scales of Interpersonal EQ (empathy, interpersonal relationship, and social responsibility) and emotional exhaustion, a weak significant negative correlation ($r = -0.299$, & p value=0.017<0.05) can be seen between these sub-scales and depersonalization. Based on these results, it could be said that there is no relationship between the EFL teachers' rate of Interpersonal EQ (empathy, interpersonal relationship, and social responsibility) and emotional exhaustion. In contrast, the more these teachers possess these sub-scales, the less likely they may suffer from depersonalization leading to job-related burnout.

The results further confirm that there is a medium strength positive correlation ($r = 0.489$, & p value = 0.000<0.05) between sub-scales of Interpersonal EQ (empathy, interpersonal relationship, and social responsibility) and Personal accomplishment. The higher the sub-scales of Interpersonal Emotional Quotient, the higher the feeling of personal accomplishment of our teachers would be. In other words, there will be an increase in teachers' feeling of personal accomplishment if we increase these variables.

As a result of significant correlation detected, it could be noticed that a weak but significant negative correlation exists between Adaptability EQ and its sub-scales (reality testing, flexibility, and problem solving) and emotional exhaustion ($r =$ -0.387, & p value = 0.002<0.05) and depersonalization ($r = -0.362$, & p value = 0.004<0.05). The same analysis shows a strong significant positive correlation between Adaptability EQ and its sub-scales (reality testing, flexibility, and problem solving) and Personal accomplishment ($r = 0.585$, & p value = 0.000<0.05). This could mean that while an increase in rate of the teachers' reality testing, flexibility, and problem solving as the sub-scales of Adaptability EQ leads to a low decrease in their emotional exhaustion as well as depersonalization, the increase in the same variables would lead to a significant increase in teachers' Personal accomplishment.

The results also demonstrated an average strength but meaningful negative correlation between the sub-scales of Stress management (stress tolerance and impulse control) and Emotional exhaustion ($r = -0.439$, & p value = 0.000 < 0.05). These variables, on the other hand, have a weak but meaningful negative correlation ($r = -0.285$, & p value = 0.024 < 0.05) with depersonalization. Finally, Stress management sub-scales have a weak ($r =$ 0.365) but significant positive correlation (p value = 0.003 < 0.05) with Personal accomplishment. This could mean that while the teachers with higher stress tolerance and impulse control would experience somewhat less Emotional exhaustion and depersonalization, they would more likely experience higher Personal accomplishment in their job.

Finally, an average significant negative correlation exists between General mood

and its sub-scales (optimism and happiness) and Emotional exhaustion ($r = -0.439$, & p value = $0.000 < 0.05$) and depersonalization ($r = -0.362$, & p value = $0.004 < 0.05$). Optimism and happiness, in contrast, have a strong significant positive correlation with Personal accomplishment ($r = 0.567$, & p value = $0.000 < 0.05$). This means that in case there is an increase in the amount of optimism and happiness, the rate of emotional exhaustion and depersonalization would decrease to some extent. An increase in the amount of the same variables would, on the other hand, increase the feeling of Personal accomplishment of the EFL teachers to a great deal.

Putting all the aforementioned results together, we could reject the first hypothesis of study. As the results showed, not only the EI has a significant relationship with EFL teachers' burnout, but in most cases this variable explains many of the burnout related scales including emotional

exhaustion, depersonalization, and personal accomplishment. As explained earlier, overall, the higher the EQ components like intrapersonal, interpersonal, adaptability, stress management, and general mood, the lower the EFL teachers' emotional exhaustion and depersonalization, yet the greater the amount of the feeling of personal accomplishment in their job. Therefore, it could be concluded that there exists a statistically significant relationship between Iranian EFL teachers' EI and burnout. Table 6 can better depict the results and the observed relationships.

Research Question 2

The second research question asked, "Which emotional intelligence sub-categories mostly contribute to burnout?"

Having detected a statistically significant relationship between Iranian EFL teachers' EI and burnout, the researchers then tried to analyze the data in a way to

Table 6
Relationship between EI categories and burnout components

	sig	weak	average	strong	negative	positive	correlation
Relationship between EI Categories and Burnout Components (EE & D)							
Intra vs. EE & D	√	√			√		√
Inter & D	√	√			√		√
Adapt vs. EE & D	√	√			√		√
SM vs. EE & D	√		√		√		√
GM vs. EE & D	√		√	√	√		√
Relationship between EI Categories and Burnout Components (PA)							
Intra vs. PA	√		√	√		√	√
Inter vs. PA	√		√	√		√	√
Adapt vs. PA	√		√	√		√	√
SM vs. PA	√	√				√	√
GM vs. PA	√		√	√		√	√

detect the most contributing EI factors. As explained earlier, this study examined three sub-categories of the dependent variable (emotional exhaustion, depersonalization, and personal accomplishment) which are the dimensions of burnout with five factors of EI (Interpersonal, Impersonal, Adaptability, Stress management, and General mood). The following table presents a summary of the results obtained by Stepwise Multiple Regression Analysis to predict teachers' burnout through components of emotional intelligence.

Table 7
Results of stepwise multiple regression analysis about predicted frequency of burnout based on EI

Step	Prediction Variable	Beta	T	Sig	R	R^2	Adjusted R^2	F	Sig
1	General Mood	-0.585	5.63	0.000	0.585	0.342	0.331	31.70	0.000
2	General Mood	-0.367	2.63	0.011	0.627	0.393	0.373	19.44	0.000
	Adaptability	-0.314	2.25	0.028					

Note. *significant at $p \leq .05$

As displayed in Table 7, general mood ($\beta = -0.585$, $p < 0.05$) and adaptability were found to make significant contributions to the teachers' perceived sense of burnout. General mood entered in the first step, turned out to be the most powerful component of EI (Adj $R^2 = 0.331$), was responsible for 33.1% of the variance in burnout. The amount of the *beta* coefficient for general mood ($\beta = -0.314$, $p \leq 0.05$) represented that it had the most powerful or significant negative correlation with EFL teachers' burnout. In other words, the higher the general mood of the teachers, the lower their burnout would become.

In the second part of the analysis, the amount of the adjusted regression for adaptability (Adj $R^2 = 0.373$) revealed that it added 4.2% of the variance in predicted frequency of burnout. The total amount of these two components of EI indicated that general mood and adaptability determined 37.3% of the predictors of the dependent variable, teachers' burnout. The amount of the *beta* coefficient for adaptability represented that it had the second most powerful or significant negative correlation with EFL teachers' burnout. In other words, the higher the adaptability rate of the teachers, the lower their burnout would become. Accordingly, in response to the second question of the study, it could be concluded that optimism and happiness as the sub-categories of general mood, and reality testing, flexibility, and problem solving as the sub-categories of adaptability can predict the amount of burnout EFL teachers experience in their job.

DISCUSSION

The main research question in this study dealt with whether EI quotient bears any influence

on the extent of the Iranian EFL teachers' job burnout. In this regard, the findings revealed that there was a strong negative relationship between Iranian EFL teachers' EI and job burnout. Therefore, emotional intelligence is one key factor which enables teachers to cope with stress and burnout of the work sufficiently. Therefore, this skill raises the quality of effective communication between teachers and students (Hans, Mubeen, & Al Ghabshi, 2013). Teachers, who stand at the heart of education systems, should have such essential skills (e.g., awareness and aptitude); otherwise, they cannot be effective role models of knowledge for their students (Adilogullar, 2011).

The findings of this research go hand in hand with the findings of Rastegar and Memarpour (2009) in the context of Iran. Similar to our study, a significant correlation was reported between the teachers' EI and their self-efficacy. In another research on the correlation between language institute teachers' EI and their pedagogical success, Ghanizadeh and Moafian (2010) found a significant relationship between teachers' EQ and their success, teaching experience, and their age. Labbaf, Ansari and Masoudi (2011), like this study, concluded that EI had significant positive effect on effective transfer of knowledge, teamwork, and group problem solving. The findings of the study conducted by Hekmatzadeh, Khojasteh and Shokrpour (2016) further support the findings of the present study since they found a positive and significant correlation between EI and job satisfaction of EFL teachers in Iran/Shiraz. In fact, research on

resilience reports that emotionally intelligent people can turn stresses into positive forces even if dwelling with vocational stressors that normally trigger anger, anxiety, and sadness in other people (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010; Mendes, 2002). This is probably due to the fact that emotionally intelligent people can "accurately perceive and appraise their emotional states, know how and when to express their feelings and can effectively regulate their mood states" (Salovey, Bedell, Detweiler, & Mayer, 2000, p. 161).

Furthermore, it has been reported that happiness and positive emotions are strongly correlated with favorable end products, such as higher coping skills, physical and mental health, higher creativity, effective relationship functioning, and greater vocational success (Gallagher, Lopez, & Pressman, 2013). This has been supported by studies conducted by Boehm and Lyubomirsky (2008); Sin and Lyubomirsky (2009) who concluded that workplace-induced depressive symptoms were significantly higher in emotionally drained or mentally exhausted workers. According to Van Katwyk, Fox, Spector and Kelloway (2000), these people had less job involvement, but more absenteeism and turnover.

Similar to the findings of the current study (the higher the adaptability rate of the teachers, the lower their burnout), Harry and Coetzee (2013) reported that high levels of career adaptability could lower sense of coherence exhaustion and cynicism (subcategories of burnout). Similar studies

supported this notion that strong sense of coherence can lower emotional exhaustion and depersonalisation (Bezuidenhout & Cilliers, 2010; Harry, 2011; Sairenchi, Haruyama, Ishikawa, Wada, Kimura, & Muto, 2011).

CONCLUSION

The purpose of this study was to determine any significant relationship between EFL teachers' EI and the amount of burnout they may experience in their job. The major objectives of the ongoing study were to explore any significant relationship between EI and EFL teachers' burnout; then to identify the EI sub-categories that mostly contributed to the burnout. As the first finding, a statistically significant difference was found between the Iranian EFL teachers' EI and their job related burnout. Moreover, the researchers found that this relationship is both positive and negative with respect to the burnout components. In fact, while all of the five EI composite categories and their sub-categories turned out to have a significant negative relationship with burnout sub-scales namely emotional exhaustion and depersonalization, they proved to have a positive correlation with the amount of burnout and especially personal accomplishment these teachers experience in their job.

The second finding of the study highlighted the general mood and adaptability as the main categories of EI which could make significant contributions to the teachers' perceived sense of burnout. Accordingly, reality testing, flexibility, and problem solving were the subcategories of adaptability, ranked the highest impressive factors, which could noticeably predict the amount of teachers' burnout. Optimism and happiness as the sub-categories of general mood were other contributing factors to the teachers' burnout.

Teachers also need a variety of emotional resources to avoid burnout (Chang, 2009). As it was revealed in this study, almost all constructs of EI including stress management, adaptability, general mood, intrapersonal, and interpersonal competencies were related to burnout. Therefore, a teacher with high EI is predicted to have more ability to manage and control the job related stress; as a result, he or she will not be in danger of burnout. Montgomeryand Rupp (2005) also believed that those teachers who had high EI skills were more likely to cope effectively with environmental demands and pressures connected to occupational stress and health outcomes than those who enjoyed less EI.

Pedagogical Implications of the Study

The findings of this study can be important since they give clear evidence about the significant relationship between EFL teachers' EI and their job related stress and burnout. If teachers know about the possible problems related to their jobs, they will be able to communicate more effectively not only in their language classes but also with their colleagues to improve their job satisfaction and reduce burnout. As to the private institution EFL teachers, it is important for them to gain more

institutional, academic and social support in terms of human resource management, workload, professional development, teacher satisfaction, organizational learning, and development. It is believed that private institution teachers often work at domineering working conditions in which they are not given enough time and support to upgrade their knowledge or to do any research-work. Furthermore, due to their job insecurity, these teachers live with the constant fear of being thrown away out of service. All this emotional workload can, physically and mentally, be very detrimental for these private institution teachers who play critical roles in responding young learners' cumulative demands in Iran. Consequently, private institution principals play a major role on the aforementioned factors and their support can buffer against all these stress-causing factors among teachers.

Furthermore, the findings of this study can be beneficial for EFL teachers and learners since emotional intelligence is both teachable and learnable. Teacher training programs in this regard can take steps to emphasize different aspects of emotional intelligence and educate teachers how to improve their EI' leading to the reduction of their job burnout. This can also help improve the efficiency and quality of education. The results can also help to improve teachers' method of teaching while the findings add to their knowledge about their students' emotional reactions. This prepares the ground to identify their students' abilities, talents and limitations. In this way, teachers can help them improve and make progress as a student or productive members in the society. This can lead students to improve their emotional skills and achieve their educational goals and help to improve EI in individuals or assist students in knowing themselves and directing their emotions toward their educational or life related goals.

REFERENCES

Adilogullar, I. (2011). Analysis of the relationship between the emotional intelligence and professional burnout levels of teachers. *Academic Journals, 9*(1), 1–8.

Amdurer, E, Boyatzis, R.E., Saatcioglu, A., Smith, M.L., & Taylor, S.N. (2014). Long term impact of emotional, social and cognitive intelligence competencies and GMAT on career and life satisfaction and career success. *Frontiers in Psychology*, *5*(1447), 1–15.

Ashrafzadeh, A., Sayadian, S. (2015). University instructors' concerns and perceptions of technology integration. *Computers in Human Behavior*, *49*, 62–73.

Aslan, S., & Ozata, M. (2008). Investigation of the relationship between emotional intelligence and levels of exhaustion (Burnout): The case of health sector employees, *Journal of Business Administration Faculty*, *30*, 77–97.

Bar-On, R. (1997). *Bar-On Emotional Quotient Inventory (EQ-I):* Technical Manual Toronto, Canada: Multi-Health Systems.

Barr, R., Kamil, M., Mosenthal, P., & Pearson, D. (2002). *The handbook of reading research*. Mahwah, NJ: Lawrence Erlbaum.

Bezuidenhout, A., & Cilliers, F. V. N. (2010). Burnout, work engagement and sense of coherence in

female academics in higher-education institutions in South Africa. *SA Journal of Industrial Psychology*, *36*(1), 1–10.

Boehm, J., & Lyubomirsky, S. (2008). Does happiness promote career success? *Journal of Career Assessment*, *16*(1), 101–116.

Borzaga, C., & Tortia, E. (2006). Worker motivations, job satisfaction, and loyalty in public and nonprofit social services. *Nonprofit and Voluntary Sector Quarterly*, *35*(2), 225–248.

Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary-school teachers. *Psychology in the School*, *47*(4), 406–417.

Chang, M. L. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review, 21*(3), 193–218.

Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, 95(5), 834–848.

Davari, H. & Aghagolzadeh, F. (2015). To teach or not to teach? Still an open question for the Iranian education system. In C. Kennedy (Ed.), *English language teaching in the Islamic Republic of Iran: Innovations, trends and challenges* (pp.13–22). UK: British Council.

De Vito, N. (2009). *The relationship between teacher burnout and emotional intelligence: A pilot study* (Doctoral dissertation), Fairleigh Dickinson University, United States.

Eghtesadi Roudi, A. R. (2011). *Burnout among Iranian EFL teachers: Underlying reasons, influential factors and possible coping strategies* (Unpublished doctoral dissertation), Tarbiat Modares University, Iran.

Freudenberger, H. J. (1974). Staff burnout. *Journal of Social Issues, 30*, 159–165.

Gallagher, M. W., Lopez, S. J., & Pressman, S. D. (2013). Optimism is universal: Exploring the presence and benefits of optimism in a representative sample of the world. *Journal of Personality*, *81*(5), 429–440.

Ghanizadeh A, Moafian F. (2010). The role of EFL teachers' emotional intelligence in their success. *ELT Journal, 64*(4), 424–435.

Gohm, C. L., Grant, C. Corser, & Dalsky, D. J. (2005). Emotional intelligence under stress: Useful, unnecessary, or irrelevant? *Personality and Individual Differences, 3*(9), 1017–1028.

Goleman, D. P. (1995). *Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement.* New York: Bantam Books.

Goleman, D. (2001). Emotional intelligence: Issues in paradigm building. In C. Cherniss & D. Goleman (Eds.), *The Emotionally Intelligent Workplace* (pp. 13–26). San Francisco: Jossey-Bass.

Goleman, D. (2005). *Emotional intelligence: Introduction to the tenth anniversary edition*. New York: Bantam.

Gullue, A. C. (2006). *Relations between professional burnout and emotional intelligence: Implementation for managers* (Unpublished master dissertation), Atatürk University, Turkey.

Hakanen, J. J. & Schaufeli, W.B. (2012). Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *Journal of Affective Disorders*, *141*(2-3), 415–424.

Hans, A., Mubeen, S. A., & Ghabshi, A. (2013). A Study on Locus of Control and Job Satisfaction in Semi-Government Organizations in Sultanate of Oman. *The SIJ Transactions on Industrial, Financial & Business Management*, *1*(2), 93-100.

Harrod, N. R., & Scheer. S. D. (2005). An exploration

of adolescent emotional intelligence in relation to demographic characteristics. *Adolescence, 40*(159), 503–512.

Harry, N. (2011). *Sense of coherence, affective wellbeing and burnout in a call center* (Unpublished Master dissertation), University of South Africa, South Africa.

Harry, N., & Coetzee, M. (2013). Sense of coherence, career adaptability and burnout of early career black staff in the call center environment. *South African Journal of Industrial Psychology*, *39*(2), 11–38.

Hekmatzadeh, M., H., Khojasteh, L., & Shokrpour, N. (2016). Are emotionally intelligent EFL teachers more satisfied professionally? *International Journal of Applied Linguistics and English Literature, 6*(5), 97–107.

Jennett, H. K., Harris, S. L., & Mesibov, G. B. (2003). Commitment to philosophy, teacher efficacy, and burnout among teachers of children with autism. *Journal of Autism and Developmental Disorders*, *33*(6), 583–593.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*, 607–610.

Kim, S. (2004). Factors affection state government information technology employee turnover intentions. *American Review of Public Administration*, *35*(2), 137–156.

Kremenitzer, J., & Miller, R. (2008). Are you a highly qualified, emotionally intelligent early childhood educator? *YC Young Children, 63*(4), 106–108.

Labbaf, H., Ansari, M. E., & Masoudi, M. (2011). The impact of the emotional intelligence on dimensions of learning organization: The case of Isfahan University. *Interdisciplinary Journal of Contemporary Research in Business, 3*(5), 536–545.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2004).

Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, *15*, 197–215.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D.J. Sluyter (Eds.). *Emotional development and emotional intelligence: Educational implications* (pp. 3–32). New York: Basic Books.

Mayer, J. D., & Cobb, C. D. (2000). Educational policy on emotional intelligence: Does it make sense? *Educational Psychology Review*, *12*(2), 163–183.

McCallum, F., & Price, D. (2012). Keeping teacher wellbeing on the agenda. *Professional Educator*, *11*(2), 4–7.

Maslach, C. & Leiter, M. P. (1997). *The truth about burnout*. New York: Jossey-Bass.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach burnout inventory manual* (3rd ed.). Palo Alto: Consulting Psychologist Press.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *An International Journal for the Advancement of Psychological Theory, 15*(3), 197–215.

Moafian, F., & Ghanizadeh, A. (2009). The relationship between Iranian EFL teachers' emotional intelligence and their self-efficacy in Language Institutes. *System*, *37*(4), 708–718.

Mohammadyfar, M. A., Khan, M. S., & Tamini, B. K. (2009). The effect of emotional intelligence and job burnout on mental and physical health. *Journal of the Indian Academy of Applied Psychology*, *35*(2), 219-226.

Montgomery, C., & Rupp, A. A. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education*, *28*(3), 458–486.

Mortiboys, A. (2005). *Teaching with emotional*

intelligence: A step-by-step guide for higher and further education professionals. London: Routledge.

Pazhouhesh, M. (2014). Teaching English in state-run and private language schools in Iran: Approaches, designs and procedures. *International Journal of Language Learning and Applied Linguistics World*, *5*(1), 42–52.

Pishghadam, R., & Sahebjam, S. (2012). *Personality and emotional intelligence in teacher burnout. The Spanish journal of psychology*, *15*(1), 227–236.

Platsidou, M. (2010). Trait emotional intelligence of Greek special education teachers in relation to burnout and job satisfaction. *School Psychology Professional*, *31*(1), 60–76.

Rastegar, M., & Memarpour, S. (2009). The relationship between emotional intelligence and self-efficacy among Iranian EFL teachers. *System, 37*(4), 700–707.

Sairenchi, T., Haruyama, Y., Ishikawa, Y., Wada, K., Kimura, K., & Muto, T. (2011). Sense of coherence as a predictor of onset of depression among Japanese workers: A cohort study. *BMC Public Health*, *11*(1), 205–209.

Salovey, P., Bedell, B. T., Detweiler, J. B., & Mayer, J. D. (2000). Current directions in emotional intelligence research. In M. Lewis, & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed.). New York: Guilford.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, *9*(3), 185–211.

Schutte, N. S., & Malouff, J. M. (2011). Emotional intelligence mediates the relationship between

mindfulness and subjective well-being. *Personality and Individual Differences*, *50*(7), 1116–1119.

Sin, N., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly metaanalysis. *Journal of Clinical Psychology*, *65*(5), 467–487.

Slaski, M., & Cartwright, S. (2002). Health, performance, and emotional intelligence: An exploratory study of retail managers. *Stress and Health, 18*(2), 63–68.

Thornqvist, N. S. (2011). *Emotional intelligence and burnout among teachers in a rural Florida school district* (Unpublished doctoral dissertation), University of Florida, USA.

Vaezi, S., & Fallah, N., (2011). The relationship between self-efficacy and stress among Iranian EFL teachers. *Journal of Language Teaching and Research, 5*(2), 1168–1174.

Van Katwyk, P., Fox, S., Spector, P., & Kelloway, E. (2000). Using the job-related affective well-being scale (JAWS) to investigate affective responses to work stressors. *Journal of Occupational Health Psychology*, *5*(2), 219–230.

Wang, Z. M., Lan, Y. J., Li, J., & Wang, M. Z. (2002). Study of the occupational stress of the teachers in primary and secondary school. *Modern Preventive Medicine*, *29*, 129–131.

Wright, B. E., & Davis, B. S. (2003). Job satisfaction in the public sector: The role of the work environment. *American Review of Public Administration*, *33*(1), 70–90.

Zandian, S. (2015). Migrant literature and teaching English as an international language in Iran. In

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High Grade-Point Average and Predictors among Filipino University Students

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ABSTRACT

A high grade-point average (GPA) is considered important because of its ramifications for young people's job and career prospects. Although various studies have examined GPA in terms of its predictors, the predominant research focus has been on US samples of university students. This study determines the independent associations of socio-demographic characteristics, lifestyle activities, and academic motivation with a high GPA among a sample of 3011 Filipino university students. Data were analyzed using logistic regression, with GPA as the dependent variable and socio-demographic characteristics (sex, age, course, and weekly allowance); lifestyle activities (smoking, alcohol intake, number of social networking accounts, number of hours spent in social media, level of physical activity, and level of religious activities); and academic motivation as the independent variables. Of the 11 predictors examined, six had a statistically significant relationship with a high GPA: three socio-demographic characteristics (sex, course, and weekly allowance); two lifestyle activities (smoking and religious activities); and academic motivation. Although the regression model fitted the data well, it only explained 10.6-15.4% of the variance in the dependent variable. Prospective studies need to further validate this model, broaden the measures of the assessed predictors, and identify the statistical significance of other predictors.

Keywords: Academic motivation, Filipino university students, grade-point average, lifestyles, socio-demographic characteristics

INTRODUCTION

Having a formal higher education is critical to young people's social mobility, particularly their job and career prospects

(ILO, 2010). Governments, companies, educational institutions, and parents are working together to provide an array of educational opportunities to young people. From 2005-2025, the average annual growth rate of students enrolling in higher educational institutions throughout the world would exceed 3.0%. By 2025, globally, there would be approximately a quarter of a million university students (Maslen, 2012). To date, the Philippines has only around 3.0 million, but within the next two decades, its university student population—given an annual growth rate of 3.27% across all fields of study (Commission on Higher Education, 2014)—is expected to double.

The enormous number of university student population has social and occupational mobility implications for young people. This means that young people need to compete—in their own as well as in other countries—not only for admission at higher educational institutions but also for employment and other mobility-related opportunities in industries and government, non-government, international, and global organizations. Because of the highly competitive socio-economic environment, young people are commonly counseled to earn good grades to improve their career and social mobility prospects. Indeed, some young people are acquiring high grades and pursuing their chosen career paths (Tomlinson, 2014).

The published research literature has amply described young people with a high grade-point average (GPA) in terms of their characteristics. However, most prior large-scale analyses on GPA and its predictors have concentrated predominately on samples of young people in the US. Parallel evidence from developing countries (e.g., Philippines) is sparse. This study examines and discusses socio-demographic characteristics, lifestyle activities, and academic motivation as predictors of a high GPA among a survey sample of Filipino university students. This study would not only expand on a subject that mainly reports US-based findings, but its results would also have international implications, particularly that it might be common for the present generation of students, including those in the Philippines, to attend universities and/or seek employment in other countries. It is thus important to understand factors related to students' academic achievement from various parts of the world.

LITERATURE REVIEW

Grades earned from completed subjects are a common objective indicator of academic performance. More than their numerical values, grades have social and cultural meanings. For instance, high grades are indicative of hard work, conscientiousness, resilience, and persistence (Lee, Baring, & Sta. Maria, 2016). Because of their associated values, high grades are markedly regarded as a pathway to better jobs and careers (Tomlinson, 2014). Knowing these normative values and knowing that organizations are using GPA as a selection tool (Imose & Barber, 2015) tend to drive many young people to want and acquire high grades.

A large number of young people in US colleges and universities have a high GPA. An analysis of six studies, with sample sizes ranging from 985-105,012, reveals that 39.0-85.7% of US-based students were found to have a high GPA (i.e., either A or B) (Bell, Wechsler, & Johnston, 1997; Eisenberg, Neumark, & Lust, 2005; Huang, DeJong, Towvim, & Schneider, 2009; Shegog, Lindley, Robinson, Simmons, & Richter, 2010; Primack, 2011; Wells et al., 2015). As a time-based performance indicator, GPA is a robust measure of academic performance. However, a high GPA seldom occurs in the long run due to chance. Research has shown that a high GPA is associated with a number of predictors. This study examines three sets of predictors, namely, socio-demographic characteristics, lifestyles, and academic motivation.

Social structures and socio-demographic characteristics, such as sex, age, course category, and allowance, effectively organize young people into groups. Within a group, members are provided with opportunities to acquire values, traits, and resources that would help them earn high grades. Sex does not only refer to maleness and femaleness; it also prescribes social norms that guide academic performance. In highly patriarchal societies, such as the Philippines, young males are expected to perform, achieve, and lead more than their female counterparts (Moran, 1992); subsequently, young males are expected to acquire high grades.

Like sex, age is more than simply a socio-demographic category. Major age levels have their corresponding sets of norms that could also impact GPA. Usually, higher age levels call for higher levels of responsibilities suggesting that young people who are older are expected to earn high grades. According to a study by Wolaver (2002) (n=17,592), older, rather than young, college students have a high GPA. One's course also has a potential to influence one's GPA. When enrolled in their respective degree programs, young people need to abide with, and adjust to, the norms of their respective courses. Academic courses, such as engineering on the one hand and social sciences on the other, are governed by their own distinctive educational inputs, processes, and outcomes, not to mention that their respective faculty members have patterned differences in the ways they award grades. Disparities in the learning systems between course categories could therefore impact how young people earn their GPA. According to a study by Rask (2010) (n = 5000+), the five lowest GPAs (2.78-3.02) are acquired by young people matriculating in STEM (science, technology, engineering and mathematics) courses, while the five highest GPAs (3.22-3.36) are obtained by those enrolled in non-STEM courses.

Regardless of their sex, age, and course, young people, while studying, need funds for their subsistence and other expenses. In contrast to young people in the US who have multiple ways of meeting their non-tuition financial needs (e.g., via loans, scholarships, employments, and parental support), those in the developing countries, such as the Philippines, rely heavily on the allowance given to them by their parents. Whether it

is received daily, weekly or monthly, an allowance could serve as a social security for young people. At a certain threshold, it could affect GPA positively, where a high allowance may result in a high GPA. Large-scale evidence in support of the GPA-allowance nexus is scant, but a related study by Stinebrickner and Stinebrickner (2000) (n=2,999) suggests that family income as a source of allowance for young people affects GPA.

On top of being embedded in their respective socio-demographic categories, young people also have their lifestyle activities. These activities are prescribed—directly or indirectly—as part of their age-graded and gender-related identities and norms or their socialization towards adulthood. As a set of sociocultural or sub-group practices, lifestyle activities are life-changing phenomena, with both negative and positive consequences. On the one hand, lifestyle activities demand a certain amount of time and attention from young people, fostering norms and behaviors that are inimical to their academic performance; for example, lifestyle activities influence young people to defocus from their studies. On the other hand, lifestyle activities provide young people with inputs for further inspiration and zeal, thereby improving their interest in, and focus on, their studies. Lifestyle activities could be a boon or bane to those seeking high grades. This study examines lifestyle activities related to smoking, alcohol intake, social media usage, physical activity, and religiosity.

The inverse relationship of lifestyle activities with GPA has been reported in US studies. For example, students who smoked versus those who did not smoke (n = 9931) (University of Minnesota, 2008); and students who took alcohol versus those who did not drink alcohol or who drank less alcohol (n = 28,000) (Center for the Study of Collegiate Mental Health, 2009) were found with a lower GPA. High alcohol levels have debilitating effects on brain functioning (US Department of Health and Human Services, 2004) and subsequently, on academic performance. Other studies reported findings on GPA and social media usage, which refers to the usage of either multiple social networking sites (SNS) or Facebook, one of the most popular SNS in the world and in the Philippines. Prior studies have mixed results on the relationship between use of social media and GPA. While the research by Junco (2012) (n=1839) underscored a statistically significant inverse relationship between social media usage and GPA, the research by Harrigittai and Hsieh (2010) (n = 1060) pointed out a lack of any relationship. In this study, a negative relationship between the two variables is hypothesized. It is argued that when young people spend an inordinate amount of time on social media, they would have less time for their studies, and therefore, their chances for getting a high GPA would be lessened. Other studies reported a robust positive association of GPA with physical activity (n = 16,095) (Wald, Muennig, O'Connell, & Garber, 2014)

and with religiosity (n = 3,924) (Mooney, 2010). These findings suggest that certain levels of physical activity and religiosity are linked to better grade outcomes. As a result of its effects on the human brain, physical activity promotes better concentration and other positive academic-related outcomes (Castelli, Glowacki, Barcelona, Calvert, & Hwang, 2015). Religiosity, through certain religious teachings, can help create discipline or work ethic (Mooney, 2010), which may impact young people's academic work.

Central to the study of academic performance is academic motivation, defined as a person's desire, as mirrored in his/her approach, persistence and level of interest regarding academic subjects, when competence is judged against a standard of performance or excellence (McGrew, 2007). As a psychological variable, academic motivation is a foundation of academic performance. In the absence of academic motivation at a particular threshold, a high GPA is unlikely. Much of the evidence linking academic motivation and GPA is drawn from studies with modest sample sizes (e.g., < 300), albeit there being no shortage of theoretical explanations on the nexus (Richardson, Abraham, & Bond, 2012).

Using logistic regression, this study determines which of the three sets of predictors, namely, socio-demographic characteristics, lifestyle activities, and academic motivation, are statistically significantly associated with a high GPA among Filipino university students. The

overarching aim is to develop a model that can help guide relevant discourse and research and program development. As mentioned, there is no large-scale analysis of predictors of GPA among local university students. This Philippine-based data is a valuable addition to the present pool of knowledge on the matter, having cross-cultural relevance.

MATERIALS AND METHODS

Study Design and Sampling

Data was drawn from a complete enumeration survey conducted in 2014 at a private university in Manila, Philippines. For this analysis, data from 3011 Filipino students was examined. At the time of the survey, respondents were enrolled in general education subjects, such as Introductory Sociology. A self-completed questionnaire was administered to respondents during the first 20-30 min of their class. The first page of the instrument was a letter introducing the research to respondents and inviting them to participate. The second page was a written consent form containing brief but vital information on the purpose of the study, survey procedures, voluntary participation, confidentiality, potential risks, and contact address of the principal investigator. At the bottom of the form was a statement regarding the willingness of respondents to answer the survey instrument, under which a blank line was included to accommodate their signature. The information contained in the consent form was used to orient each class about the study. Respondents aged 18, and older, were asked to sign the written

consent form, while those younger were requested to obtain the consent and signature of their parent or guardian. Once the consent form was signed, respondents were each given a questionnaire. No incentive was provided.

The findings discussed in this report were culled from a broader data set on well-being, social and civic engagements, and relationships among Filipino university students. The Research Ethics Committee of De La Salle University approved the implementation of the study.

Measures

The dependent variable, GPA, was based on respondents' reported grades ranging from 1.0-4.0 (the highest). GPA was recoded as a dichotomous variable: grades from 2.5-4.0 were transformed into '1' and grades below 2.5 into '0'. At the university surveyed 2.5 serves as the cut-off to indicate that a grade is good or otherwise. For example, if one of their grades falls below 2.5, respondents are excluded from the Dean's List and the honor roll. The codes '1' and '0' were used to refer to respondents with a high GPA and without a high GPA, respectively.

The four socio-demographic variables were coded as follows: sex ('1' male, '2' female), age category ('1' <18, '2'≥18), course category ('1' non-STEM, '2' STEM), and weekly allowance ('1' ≤US$30, '2' >US$30). It should be noted that, until now, Filipino students begin their university education at the age of 16. In general, US$30 a week is just enough to cover basic needs. A meal of one cup of rice and one viand costs about US$2.00 in the university. A weekly allowance of more than US$30 provides respondents with some extra amount for their leisure and entertainment activities.

Lifestyle activities covered the following six variables with their respective codes: smoking ('1' did not smoke in the past 30 days, '2' smoked), alcohol intake ('1' did not drink alcohol in the past 30 days, '2' took alcohol), number of SNS accounts ('1' 1-2, '2' >2), number of hours spent daily on social media ('1' <10, '2' ≥10), vigorous physical activity ('1' had no vigorous physical activity in the past 7 days, '2' had vigorous physical activity), and level of religious activities ('1' low (1-4), '2' high (>4). A low or high level of religious activities means having attended 1-4 or more than four religious activities in the past 30 days, respectively. Vigorous physical activity refers to fast biking, aerobics, dancing, running, basketball, swimming laps, rollerblading, tennis, and soccer, among others.

Academic motivation was based on the following seven statements: 1) I do not have any desire to go to my classes, 2) I do not attend classes as much as I used to earlier, 3) I don't feel motivated to study, 4) Going to university is pointless, 5) I have trouble starting assignments, 6) I do not find study as interesting as I used to, and 7) I have trouble completing study tasks. These statements were drawn from the University Student Depression Inventory developed by Khawaja and Kelly (Khawaja & Duncanson, 2008). Each statement has five response options, scored as- '1' none at all, '2' a

little bit of a time, '3' some of the time, '4' most of the time, and '5' all the time. These scores were recoded dichotomously for each statement, such that '1' through '3' were converted into ''1'', which means 'a low level of motivation'; and '4' through '5' into '2', which means 'a high level of motivation'.

Statistical Analysis

To examine the relationship between a high GPA and 11 predictor variables, logistic regression was performed. Compared to other statistical analytical techniques (e.g., linear discriminant function analysis), logistic regression is more robust for cases involving dichotomous outcomes, because it is not subject to strict statistical assumptions (e.g., linearity and normality) (Peng, Lee, & Ingersoll, 2002). Logistic regression analysis was performed by computing descriptive statistics, a classification table and a model summary, and adjusted odds ratios. The Statistical Package for the Social Sciences version 20 was used to process and analyze the data.

RESULTS

The variables assessed in this study are described in Table 1. Of the 3,011 respondents, 73.2% had a high GPA (i.e., ≥2.5), a little more than half (52.9%) were female, and 64.5% were aged 18 years and older. In relation to their courses, 54.3% and 45.7% of respondents were enrolled in non-STEM and STEM degree programs, respectively. Approximately 60% reported having a weekly allowance of more than US$30.0.

In the duration of 30 days before their interview, 8.9% of respondents had smoked cigarettes, while 35.0% had taken an alcoholic beverage. Of the respondents, 71.0% indicated they had more than two social networking site accounts. In terms of the number of hours spent in using social media, the findings suggest that 66.2% used social media daily for 10 hours or more. Moreover, 71.2% had a vigorous physical activity in the past 7 days and 86.6% had a high level of religious activities. Among the respondents, 62.3% and 37.7% had a low level and a high level of academic motivation, respectively.

Table 1
Descriptive results of variables

Variables	Categories	N	%
Grade-point average	0 Not high (< 2.5)	806	26.8
	1 High (≥ 2.5)	2205	73.2
Sex	1 Male	1419	47.1
	2 Female	1592	52.9
Age	1 < 18	1068	35.5
	2 ≥ 18	1943	64.5
Course	1 Non-STEM	1636	54.3
	2 STEM	1375	45.7

Table 1 *(continue)*

Variables	Categories	N	%
Weekly allowance (US$)	1 ≤ 30	1240	41.2
	2 > 30	1771	58.8
Smoking	1 Did not smoke in the past 30 days	2744	91.1
	2 Smoked	267	8.9
Alcohol intake	1 Did not drink alcohol in the past 30 days	1958	65.0
	2 Took alcohol	1053	35.0
Number of social networking site accounts	1 1-2	874	29.0
	2 > 2	2137	71.0
Number of hours spent in using social media	1 < 10	1018	33.8
	2 ≥ 10	1993	66.2
Physical activity	1 Had no vigorous physical activity in the past 7 days	868	28.8
	2 Had vigorous physical activity	2143	71.2
Level of religious activities	1 Low (1-4)	404	13.4
	2 High (>4)	2607	86.6
Level of academic motivation	1 Low	1877	62.3
	2 High	1134	37.7

The classification data in Table 2 suggests that the study's overall rate of having correctly classified the respondents in terms of their GPA was 73.7%. Table 3 shows that the variation in the dependent variable based on the 11 assessed predictors ranged from 10.6-15.4%. Results of the Hosmer and Lemeshow Test suggest that the 11-predictor model was a good fit to the data (X^2: 25.9, df 8, p = .001) (not in the table).

Table 2
Percentage of cases for which high GPA was correctly predicted given the model

Observed			Predicted		Percentage Correct
			High GPA		
			No	Yes	
Step 1	High GPA	No	134	672	16.6
		Yes	121	2084	94.5
	Overall Percentage				73.7

Table 3
Propotion of variance in high GPA given the model

Step 1	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
	3161.389	0.106	0.154

Table 4
Logistic regression results

Variables	Categories	Adjusted Odds ratios	95% CI		p value
			Lower	Upper	
Sex	1 Male	0.344	0.285	0.415	0.000*
	2 Female	Ref			
Age	1 <18)	1.097	0.907	1.326	0.341
	2 ≥18	Ref			
Course	1 Non-STEM	Ref			
	2 STEM	0.548	0.458	0.655	0.000*
Weekly allowance (US$)	1 ≤ 30	1.280	1.069	1.533	0.007*
	2 > 30	Ref			
Smoking	1 Did not smoke in the past 30 days	Ref			
	2 Smoked	0.512	0.380	0.689	0.000*
Alcohol intake	1 Did not drink alcohol in the past 30 days	Ref			
	2 Took alcohol	0.889	0.730	1.084	0.246
Number of social networking site accounts	1 1-2	Ref			
	2 > 2	1.212	0.900	1.632	0.205
Number of hours spent in using social media	1 < 10	Ref			
	2 ≥ 10	0.774	0.580	1.032	0.081
Physical activity	1 Had no vigorous physical activity in the past 7 days	Ref			
	2 Had vigorous physical activity	0.900	0.737	1.100	0.303
Level of religious activities	1 Low (1-4)	0.689	0.505	0.941	0.019*
	2 High (> 4)	Ref			
Level of academic motivation	1 Low	0.643	0.527	0.783	0.000*
	2 High	Ref			

Of the 11 predictors examined using logistic regression, six were found to have a statistically significant relationship with a high GPA. These included: three socio-demographic characteristics (i.e., sex, course, and weekly allowance); two lifestyle activities (i.e., smoking and religious activities); and academic motivation. The five predictors without any statistically significant relationship with the outcome variable were: one socio-demographic characteristic (i.e., age) and four lifestyle

activities (i.e., alcohol intake, number of SNS accounts, number of hours spent in using SNS, and physical activity) (Table 4).

Based on the computed adjusted odds ratios (AOR), female respondents were found to be more likely to earn a high GPA than their male counterparts (AOR: 0.344; 95% confidence interval (CI), 0.285-0.415; p =.000). Those enrolled in non-STEM courses had a high GPA relative to STEM students (AOR: 0.548; 95% CI, 0.458-0.655; p=.000). Rather than respondents having a weekly allowance of more than US$30 a week, respondents with a weekly allowance of less than US$30 were more likely to have a high GPA (AOR: 1.280; 95% CI, 1.069-1.533; p=.007). Additionally, respondents with a high level of religious activities tended to have a high GPA (AOR: 0.689; 95% CI, 0.505-0.941; p=.019).

Non-smoking respondents as well as those with a high level of academic motivation were about 50% more likely to earn a high GPA compared to smokers (AOR: 0.512; 95% CI, 0.380-0.689; p =.000) and those with a low level of academic motivation (AOR: 0.643; 95% CI, 0.527-0.783; p=.000), respectively.

DISCUSSION

This study examined the independent statistical relationships of 11 predictors of a high GPA among a sample of 3,011 Filipino university students. The number of large-scale studies analyzing these predictors, specifically among Filipino university students, is sparse. This study, particularly its final model, is a contribution to the current pool of systematic knowledge on a topic having employment and career ramifications for young people. The present study found that a high GPA was common among the Filipino university students interviewed, implying that many local students have already begun forming a crucial academic-based capital for their future career and social mobility.

Young people with a high GPA have been described, in US studies, with respect to their socio-demographic characteristics, lifestyle activities, and academic motivation. This study confirmed the statistically significant relationship of six predictors, based on the model formed from the analysis of a data set involving Filipino university students. The current findings on the direction of the bivariate relationships—whether these are positive or negative—are not necessarily aligned with the findings reported in US studies, possibly because of differences in the samples and methodologies used and the sociocultural contexts. Overall, the model involving a high GPA comprised of six predictors: sex (females), course (non-STEM students), weekly allowance (low level), smoking (non-smokers), religious activities (high level), and academic motivation (high level).

Females had a high GPA, because they tend to be more self-disciplined and conscientious than males. For instance, female students are more likely to take down notes in class, transcribe lectures more accurately, and remember lecture content better (Voyer & Voyer, 2014). The high GPA among non-STEM students and the

low GPA among STEM students may have had to do with the ways teachers, including those in the Philippines, award grades. The finding is that non-STEM teachers award higher grades than their STEM counterparts (Rizvi, 2015), probably due to variations in the learning strategies, processes and outcomes between these courses. The hypothesized positive association between a high level of financial allowance and a high GPA did not materialize in this analysis. Instead, students with a low level of allowance were observed to have a high GPA. Having just enough allowance may constrain students from spending money and time for leisure and entertainment activities, which may then influence them to spend their free time in studying. In contrast, having more than enough allowance, and therefore, having some leisure and entertainment activities could also adversely affect students' academic performance. Although the academic impact of allowance is relatively unexplored, there is some evidence regarding the disruptive effects of certain forms of allowance on grades (Mandell, 2016).

Non-smokers had a high GPA, because they were probably less stressed than smokers, and as a result, they could have had more focus on, and greater control over, their academic performance. Tobacco use is an indicator for other health conditions, such as stress levels (Lederman, 2008), and is widely practiced among young people because of its calming effects (File, Fluck, & Leahy, 2001). The high GPA among highly-religious students could be a consequence of the learning they acquire from their religion. For example, the regularity in which young people perform religious activities (e.g., praying and attending religious services) could have developed in them a sense of order, structure and discipline (Mooney, 2010). These values are fundamental to young people's movement towards achieving a high GPA.

That Filipino students with a high GPA also had a high level of academic motivation is hardly surprising. As a constitutive element, academic motivation propels young people's movement towards their academic goals. While a passing grade only demands a modicum of academic motivation, a high GPA requires young people to possess an elevated desire and a need for a wide spectrum of academic matters (Richardson, Abraham, & Bond, 2012), involving, for instance, class attendance, subjects, study tasks, and university education. Class attendance alone is a very crucial personal input for academic performance (Baxter, Royer, Hardin, Guinn, & Devlin, 2011).

In the absence of statistically significant associations with a high GPA, the study's model of predictors excluded one socio-demographic characteristic (i.e., age) and five lifestyle activities (i.e., number of SNS accounts, number of hours of social media usage, alcohol intake, and physical activity). The absence of their associations with GPA, which is not consistent with evidence from US studies, suggests that a high GPA could not be attributed to any category of students across these variables. The findings thus indicate that those with

a high GPA were either young or old; had some or a broad array of SNS accounts; had some or longer hours of social media usage; were non-alcohol or alcohol drinkers; and were engaged or not engaged in a vigorous physical activity. The following explanations are offered for these empirical deviations.

Like their older counterparts, young students also had a high GPA, probably because they were still enrolled, as first and second year students, in general education subjects when interviewed. Overall, introductory or 101 subjects are relatively easy (Central Michigan University, 2005). Some of these young students could have also taken the opportunity to acquire high grades in these subjects so that they could later shift to other disciplines with better job and career prospects. At their ages, many of these university students are still uncertain about the degree program they would want to pursue (Freedman, 2013). Despite their heavy use of social media and their alcohol drinking habits, students—along with others who were not heavy users of social media and alcohol drinkers—also had a high GPA. The heavy users and drinkers appeared to have managed their engagements in social media and alcohol consumption well in relation to their academic tasks. It was plausible, for example, that these students could have used their social media judiciously even while attending classes and studying (in many parts of the world, including the Philippines, instruction and learning have yet to be fused with social media, or vice versa). Furthermore,

regarding alcohol consumption, some of these students could have consumed alcohol only during their free time, weekends or holidays, and they could have also controlled the amount of their alcohol intake. Overall, these students could have effectively reined in their lifestyle activities to remain focused on their academic performance. Finally, like those engaged in vigorous physical activity, students who were not engaged in any physical activity, also had a high GPA. In lieu of having vigorous physical activity, some of these students could have exercised lightly or moderately; research has shown that this, too, has a positive effect on academic performance (Booth et al., 2013).

This study has some limitations. Since the sample was drawn from an elite university in the Philippines, the findings may not be fully applicable to the broader population of Filipino university students. The GPA data was also based on self-reports, which are normally subject to under- or over-estimation (Prince et al., 2008). In addition, the variable measures failed to cover some deeper aspects of the assessed predictors, such as the specific social media activities or the specific vigorous physical activities performed by students. These additional details could have provided the study with further information to better appraise the results. Lastly, the study's 6-predictor model could only explain 10.6-15.4% of the variance in GPA, implying that there are other influences on the outcome variable that studies have yet to uncover, at least in the case of local university students. More studies are needed

to further validate, or expand, the scope and coverage of the present findings. Prospective research should cover samples of university students from other economic backgrounds, more nuanced measures for the assessed predictors, and other independent predictors.

CONCLUSION

Academic performance, as evidenced in a high GPA, has been linked to factors related to the characteristics of university students. Among a sample of 3,011 Filipino university students, the study identified six of these characteristics, namely, sex, course, weekly allowance, smoking status, religious activities, and academic motivation. The combined predictive power of these six statistically significant characteristics was rather modest. Age and the other lifestyle activities examined were not statistically significantly related with a high GPA. These exploratory findings need further validation in other university student samples. It is important to establish the body of systematic knowledge on GPA and its predictors among non-US samples, given that the topic has ramifications for universities seeking to improve the academic performance and the social and career mobility prospects of young people.

REFERENCES

Baxter, S. D., Royer, J. A., Hardin, J. W., Guinn, C. H., & Devlin, C. M. (2011). The relationship of school absenteeism with body mass index, academic achievement, and socioeconomic status among fourth grade children. *Journal of School Health, 81*(7), 417–423.

Bell, R., Wechsler, H., & Johnston, L. D. (1997). Correlates of college student marijuana use: Results of a US National Survey. *Addiction, 92*(5), 571-581.

Booth, J. N., Leary, S. D., Joinson, C., Ness, R., Tomporowski, P. D., Boyle, J. M., Reilly, J. J. (2013). Associations between objectively measured physical activity and academic attainment in adolescents from a UK cohort. *British Journal of Sports Medicine, 48*(3), 265-270.

Castelli, D. M., Glowacki, E., Barcelona, J. M., Calvert, H. G., & Hwang, J. (2015). Active education: Growing evidence on physical activity and academic performance. *Research Brief.* Retrieved February 14, 2017, from http://activelivingresearch.org/sites/default/files/ALR_Brief_ActiveEducation_Jan2015.pdf.

Center for the Study of Collegiate Mental Health. (2009). Study: Inverse relationship between alcohol abuse and college GPA. *Penn State News*. Retrieved February 14, 2017, from http://news.psu.edu/story/172329/2009/11/16/study-inverse-relationship-between-alcohol-abuse-and-college-gpa.

Central Michigan University. (2005). Student opinion survey on the general education program at CMU. Michigan: CMU. Retrieved February 14, 2017, from https://www.cmich.edu/office_provost/AcademicAffairs/gened/Documents/GenEd_Survey_Report_Student.pdf.

Commission on Higher Education (2014). Higher education in numbers. Quezon City, Philippines: CHED. Retrieved February 14, 2017, from http://www.ched.gov.ph/index.php/higher-education-in-numbers/enrollment/.

Eisenberg, M. E., Neumark, D. S., & Lust, K. D. (2005). Weight-related issues and high-risk sexual behaviors among college students. *Journal of American College Health, 54*(2), 95-101.

File, S. E., Fluck, E., & Leahy, A. (2001). Nicotine has calming effects on stress-induced mood changes in females, but enhances aggressive mood in males. *International Journal of Neuropsychopharmacology, 4*(4), 371-376.

Freedman, L. (2013). The developmental disconnect in choosing a major: Why institutions should prohibit choice until second year. *The Mentor.* Retrieved February 14, 2017, from https://dus.psu.edu/mentor/2013/06/disconnect-choosing-major/.

Harrigittai, E., & Hsieh, Y. P. (2010). Predictors and consequences of differentiated practices on social network sites. *Information, Communication & Society, 13*(4), 515-536.

Huang, J. H., DeJong, W., Towvim, L. G., & Schneider, S. K. (2009). Sociodemographic and psychobehavioral characteristics of US college students who abstain from alcohol. *Journal of American College Health, 57*(4), 395-410.

ILO. (2010). *A skilled workforce for strong, sustainable and balanced growth.* Geneva: International Labor Organization. Retrieved February 14, 2017, from https://www.oecd.org/g20/summits/toronto/G20-Skills-Strategy.pdf.

Imose, R., & Barber, L. K. (2015).Using undergraduate grade point average as a selection tool: A synthesis of the literature. *The Psychologist-Manager Journal, 18*(1), 1-11.

Junco, R. (2012).The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education, 58*(1), 162-171.

Khawaja, N. G., & Duncanson, K. (2008). Using the university student depression inventory to investigate the effect of demographic variables on students' depression. *Australian Journal of Guidance and Counseling, 18*, 1-15.

Lederman, D. (2008). Health, behavior and college GPA. *Inside Higher Ed.* Retrieved February 14, 2017, from https://www.insidehighered.com/news.

Lee, R. B., Baring, R. V., & Maria, M. A. Sta. (2016). Gender variations in the effects of number of organizational memberships, number of social networking sites, and grade-point average on global social responsibility in Filipino University students. *Europe's Journal of Psychology, 12* (1), 191-202.

Mandell, L. (2016). *Child allowances – beneficial or harmful?* Retrieved February 14, 2017, from http://lewismandell.com/child_allowances_-_beneficial_or_harmful.

Maslen, G. (2012). Worldwide student numbers forecast to double by 2025. *University World News.* Retrieved February 14, 2017, from http://www.universityworldnews.com/article.php?story=20120216105739999.

McGrew, K. S. (2007). *Beyond IQ: A model of academic competence and motivation.* St. Cloud, Minnesota: Institute for Applied Psychometrics. Retrieved February 14, 2017, from http://www.iapsych.com/acmcewok/map.htm.

Mooney, M. (2010).Religion, college grades and satisfaction among students at elite colleges and universities. *Sociology of Religion, 71*(2), 197-215.

Moran, B. B. (1992).Gender differences in leadership. *Library Trends, 40*(3), 475-491.

Peng, X. Y., Lee, K. L., & Ingersoll, G.M. (2002). An introduction to logistic regression analysis and reporting. *The Journal of Educational Research, 96*(1), 3-14.

Primack, B. A. (2011). Hookah tobacco smoking among U.S. College students (Doctoral dissertation). Retrieved February 14, 2017, from http://d-scholarship.pitt.edu/6229/1/primack_dissertation_final_2011_11_08.pdf

Prince, S. A., Adamo, K. B., Hamel, M. E., Hardt, J., Gorber, S. C., & Tremblay, M. (2008). A

comparison of direct versus self-report measures for assessing physical activity in adults: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity, 5*, 56-80.

Rask, K. (2010). Attrition in STEM fields at a Liberal Arts College: The importance of grades and pre-collegiate preferences. *Cornell University ILR School Working Papers*. Retrieved February 14, 2017, from http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1141&context=workingpapers.

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin, 138*(2), 353-387.

Rizvi, S. A. (2015). RMP evaluations, course easiness and grades: Are they related? *Practical Assessment, Research and Evaluation, 20*(20), 1-8.

Shegog, M. L, Lindley, L., Robinson, M. T., Simmons, D., & Richter, D. (2010). HVI/STI risk factors among African-American students attending predominantly white universities. *Journal of Health Disparities Research and Practice, 4*(1), 86-98.

Stinebrickner, T. R., & Stinebrickner, R. (2000). *The relationship between family income and schooling attainment: Evidence from a Liberal Arts College with a full tuition subsidy program*. Ontario, Canada: The University of Western Ontario; Berea, KY, US: Berea College. Retrieved on February 14, 2017, from http://adfdell.pstc.brown.edu/papers/stisti02.pdf.

Tomlinson, M. (2014). *Education, work and identity: Themes and perspectives*. London: Bloomsbury.

University of Minnesota. (2008). Grades in college directly linked to health-related behaviors. *Science Daily*. Retrieved February 14, 2017, from www.sciencedaily.com/releases/2008/10/081021120925.htm.

US Department of Health and Human Services. (2004). Alcohol's damaging effects on the brain. *Alcohol Alert*. Retrieved February 14, 2017, from http://pubs.niaaa.nih.gov/publications/aa63/aa63.html.

Voyer, D., & Voyer, S. (2014). Gender differences in scholastic achievement: A meta-analysis. *Psychological Bulletin, 140*(4), 1174-1204.

Wald, A., Muennig, P. A., O'Connell, K. A., & Garber, C. E. (2014). Associations between healthy lifestyle behaviors and academic performance in U.S. undergraduates: A secondary analysis of the American College Health Association's National College Health Assessment II. *American Journal of Health Promotion, 28*(5), 298-305.

Wells, A., Karpe, V., Butler-Barnes, S. T., Cunningham-Williams, R. M., Sanders-Thompson, V., Williams, S. L., & Jones, B. D. (2015, November). GPA among African American female college students: Examining lifestyles and preventive health behaviors. Paper presented at *The Social and Behavioral Importance of Increased Logevity, New Orleans, Louisiana, USA*.

Wolaver, A. M. (2002). Effects of heavy drinking on study effort, grade point average, and major choice. *Contemporary Economic Policy, 20*(4), 415-428.

SOCIAL SCIENCES & HUMANITIES

Variations in the Asian Collectivistic Working Culture in Intercultural Collaboration: A Case of a South Korean Company in Malaysia

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ABSTRACT

This study examined the prevailing differences between the collectivistic values of South Korean and Malaysian workers in a multinational company operating in Malaysia. Descriptive data from participant observations and in-depth interviews were used to scrutinize the background of the variations in the collectivistic values, their impact on the employees' behaviour and the intercultural conflicts between the two parties. This empirical work observed that South Korean and Malaysian workers shared the same elements of collectivistic values. However, their interaction revealed variations in the target group of loyalty in the process of achieving solidarity and object of commitment. In short, the dominant values perceived in this analysis manifested strong orientation towards family, teamwork, and the relationship among the Malaysian workers whilst South Korean workers prioritized organizational interests, loyalty, and uniformity for the sake of solidarity and sense of belonging. Findings of this study also suggested how the variations in the collectivistic values have led to a differing interpretation of the situation, work, and relationship, thus resulting in diverse approaches in the workplace.

INTRODUCTION

Collaboration and interdependence between nations are prerequisites for economic growth in the era of globalization and neo-liberalism. Most nations in the world have some form of cooperation with other nations in the interest of their economy, and this

makes for a more interdependent world. In such a context, obviously a distorted view of other cultures can be the main source of strained relations between different groups of people. Such distorted views manifest the lack of integral social skill for the cultivation of mutual understanding based on some consensus of values in a given situation. More specifically, cultural misunderstanding or misperception can lead to conflicts at the workplace itself particularly when it comprises of workers from various socio-cultural backgrounds.

Most research on cross-cultural diversity or conflicts have focused primarily on the economic relations or contact between developed Western nations and the non-Western developing nations around the world.[1] Such research focused on the conventional trend where the investment cooperation basically consists of capital flowing from the advanced Western countries to the economies of the underdeveloped or developing nations outside their region. In spite of the fact that the South-South cooperation, meaning relations and collaboration among developing nations in particular among Asian nations, have been growing, there is still a conspicuous lack of research interest in this type of collaboration and the challenges accompanying it, including the problem of cross-cultural

conflicts. This lack of research interest can be explained to some extent by the following reasons. Firstly, given the relatively short history of the South-South cooperation, this trend cannot as yet boast of a long tradition with clear significance within the total global economy. Secondly, there is a general assumption among scholars, latent or implicit, that belonging to a vague notion of Asian culture; Asian nations share many values in common, rendering the chance of cross-cultural conflicts among them rather remote. By the same token, it is this vague sense of Asian culture that leads to the categories of individualism and collectivism in parallel with the division between Western and Asian nations, where individualism and collectivism are primarily defined with reference to industrialization. Hence, the matrix of Western, industrialized and individualistic against Asian, non-industrialized and collectivistic.

Hofstede (1980, 2002) elucidated the main cultural characteristics of a collectivistic culture, distinguishing it from the individualistic culture. From the point of view of understanding cross-cultural conflicts, some of the characteristics of the identity dimension enumerated by Hofstede can certainly influence workers and management in terms of their attitudes and behaviour, brooding cross-cultural conflicts in multinational firms whenever their differences are irreconcilable in group relations. Another group of scholars proposed other variations of collectivism, including what they typified as vertical and horizontal collectivistic culture (Triandis,

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[1]Asma Abdullah (2001); Bae and Chung (1997); Bhaskaran and Sukumaran (2008); Cho and Park (1998); Daria et al. (2015); Fontaine and Richardson (2005); Hofstede et al. (2002); Jamaliah (1996); Sinaga (1998); Triandis (2002); Schwartz and Bardi (2001); Leung and Tjosvold (1998); McSweeney (2002); Smith et al. (1996); Triandis (1998, 2002); Trompenaars and Hampden-turner (1993)

1994, p. 42). According to this construction, vertical cultures are characteristically traditionalistic, bent upon emphasising in-group cohesion based on deep allegiance to group norms and compliance with the directives of authority (Bond and Smith, 1996). In distinction from the vertical form, horizontal collectivistic cultures emphasize empathy, sociability and cooperation in social relations (Triandis & Gelfand, 1998, pp. 118-128). Hall (1976) coined the terms 'high context' and 'low context' to differentiate the communication styles of various cultural groups and his approach had been widely employed by researchers studying cross-cultural communication.[2]

Some other scholars consider another variation, male collectivism, as being moulded essentially from group membership, while the polar variety, female collectivism, is primarily derived from more specific or personal relations (Gabriel & Gardner, 1999). Others also made the point that in reality, these typologies are by no means exclusive of each other. For instance Triandis (1998, pp. 118-128)

thinks that a single society may manifest both individualistic and collectivistic values simultaneously, as individualism and collectivism can co-exist within a single culture. House and his colleagues (2004) had proposed a typology based on the nature of group evaluation. They put forward the three levels of collectivism, namely societal, institutional and in-group collectivism.[3]

If indeed most Asian societies share similar values by virtue of their collectivistic culture as Hofstede had asserted, which presupposed some measure of consensus and solidarity among them, the cooperation between these collectivistic cultures should be relatively free of value conflicts and cultural antagonism. The authors take the case of Malaysia and South Korea as an example. According to his analysis, based on identity dimension, Hofstede (1980, p. 53) ranked Malaysia and South Korea as the 36th and the 43rd respectively in the list of 50 countries subsumed under collectivism. This paper has employed Hofstede's approach to analyse Asian collectivistic cultures over other approaches by scholars such as Hall (1976); House (2004); Triandis (1994) because it is most pertinent to the problems of cultural divergence faced by the Korean company being researched.

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[2]Hall (1976) distinguished cultures according to the way of communication, the way of presenting emotions, conveying intention and ideas among members of society; 'high context' and 'low context'. In his model, the context is circumstances and information which are used by group of people to interact and communicate with others. The workers from high context culture are depending non-verbal indication and situational factor to communicate and to understand other people as body language, intonation of voice, situation, and status all convey the message that decide the behaviour and interpretation. These characteristics of high context culture portray some similarities with collectivistic culture.

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[3]Drawing upon their research on sixty two nations, they constructed varieties of collectivistic and individualistic groupings. This categorization contributes significantly to our understanding of the complexity of collectivism and individualism. Based on the characteristics of their cultural identities, House and his colleagues came up with the following grouping of nations: North Europe, Anglo Europe, South America, Confucian Asia, Southern Asia, and Africa.

Contrary to the harmonious picture conjured by many scholars, the relations and contacts between South Korean and Malaysian workers indicated many problem areas and even actual conflicts as they are drawn into a competition to safeguard and advance their respective interests in an era of intense globalization. [4] Indeed, Malaysian workers often find themselves in a situation of conflicts at their workplace since they have to adapt to the new conditions and demands of the industrial corporate culture, to the rules and expectations stipulated by various multinational managements. [5]

This paper aims to analyze the manner in which intercultural variations of the collectivistic culture influence workers' values and perceptions about work. The collective culture shapes the relationship between the workers as these variations of cultural orientation and mode of thinking between different cultural groups affect their reactions to issues, molds their management or working style and communication method. These culturally influenced behaviors, unless appreciated and skillfully handled could lead to a severe dispute or conflict.

METHODS

For the purpose of identifying some root causes of cross-cultural conflicts between two Asian cultures, this study was conducted in a South Korean multinational company operating in Malaysia, adopting the empirical and socio-cultural approaches involving interviews, participant observations, and questionnaires. [6] However, this paper,

[4] Korean multinational companies' culture is considered to have various distinctive features. First, they have 'strong' corporate cultures which needed to be adhered to by their employees without exceptions. Second, they emphasize a strong sense of loyalty and belonging among the workers so that the workers identify the company's success as their own success. Third, they have extremely 'result-oriented' or 'success-oriented' evaluation practices. Fourth, they have an authoritarian leadership and 'top-down' procedure to coerce the employees to obey the orders of their leaders without questioning them. Fifth, they invest in the employees' improvement and development for the sake of the companies' future. Sixth, they emphasize prompt actions and modification of direction in their jobs according to the changes in the market or the demands of the clients. As a result, these conditions and expectations of multinational companies' cultures have been responsible for local workers' predicaments due to the cultural disparity between the workers' own culture and the Korean companies' culture. (Ahn, 1996; Bae & Chung, 1997; Cho & Park, 1998; Han, 2003; Kearney, 1991; Kenneth, Kimball, & Marshall, 1998; Kim, 1995; Kumar & Kim, 1984; Lee, 2001; Lee & Shin, 2000; Saccone, 1994; Shin, 2000)

[5] According to the MIDA's report (2003), multinational companies in Malaysia have selected Malaysia as their investment destination due to Malaysia's stable economic status, government's FDI policies, well-educated human resources, developed infrastructure, appropriate/favourable economic environments, and high-quality of life for expatriates. Meanwhile,

Korean multinational companies prefer Malaysia as it has strong foreign exchange reserves, business-friendly government, transparent, hospitable and supports the FDI investment policies, a satisfactory infrastructure, harmonious industrial condition, educated and trained workforces, high standard of living, and good record-taking practices. (KOTRA, 2007).

[6] Questionnaires were used as a preliminary research to gather basic data pertaining to cultural divergence between the respective parties. The author utilized the questionnaires in order to reap the benefits of direct personal contact, so as to be able to 'emphatically' understand the views of the respective groups have been used to collect basic data about cultural divergence and two sides' stance on the conflicts and back grounds. When respondents were asked about their perception of the other party, it is observed that most of the negative perceptions were

places considerable emphasis on the qualitative method, drawing significant insights from in-depth interviews with key informants and participant observations. Participant observations of the workers yielded significant data. The authors were fortunate to have many opportunities to conduct participant observations.[7] Based on the findings of the pilot study, the authors conducted in-depth interviews with 37 respondents in the year 2000 to 2013**.**[8] These informants represented a selection of managers based on years of service, educational background, position, gender and the nature of their work and experience. The main informants for this research comprised of two major groupings: local Malaysian managers and Korean expatriates who had experienced or directly witnessed cross-cultural misunderstandings or conflicts in the company. The authors had conducted face to face in-depth interviews with each participant and each interview

took on the average one and half hour to get the details of the intercultural differences and predicaments.

RESULTS

Within this framework of the inquiry, this paper examines two illustrative cases of conflict between South Korean and Malaysian workers[9], seeing how value differences colored the way they interpreted their situation. It is generally acknowledged that one main trait of collectivistic values is its emphasis on loyalty and the sense of belonging to the society and organization. It is, however, interesting to note that although both South Korean and Malaysian culture are perceived as collectivistic, their perception of solidarity, sense of belonging and loyalty are different, as illustrated by the following cases.

Case 1: Conflicting Concept of Solidarity

The marketing department had two separate programmes, a dinner gathering, and a company event within a week. All departmental staff were supposed to attend. Although Encik M[10] who has worked for a year in the department felt uneasy about

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[7] invariably formed in trying times or 'the pressure of the situation' in the work place.

[7] These opportunities include the capacities of the authors as an interpreter, a lecturer of Korean and Malay language and culture in 1993, 1995, 1997, 2000, 2005, 2010 and 2013. These exposures and experiences have furnished valuable insights into the background of conflicts between two parties.

[8] In 2000 and 2005, the authors conducted an in-depth interview with 25 Malaysian workers and 5 Korean expatriates working in the company, who had experienced predicaments in intercultural cooperation while they were working together to achieve the goals set by the company. In 2010 and 2013, the authors have re-interviewed 3 Malaysians and 2 Koreans who were the initially interviewed in 2000 and 2005. Two new Malaysian workers were also interviewed in order to update the information and scrutinize any improvements in the cross-cultural management in the Korean company.

[9] This company hires 6804 local and foreign workers and the majority of workers are Malay ethnic group (75%). The conflict cases mainly involved Korean and Malay workers, whose values are markedly different from the Koreans respondents in this paper.

[10] To protect the informants, the real names of the informants are replaced with Mr. K for Korean informant and Encik M is used for Malay informant in conflict cases to differentiate them from the Korean. Encik means Mr. and Puan stands for Mrs. in the Malay language.

it, he could not attend because he had important family matters to attend to in his hometown. He felt better after asking his colleague to inform his Korean superior of his problem. When Encik M came to office the following Monday morning Mr. K, his Korean boss, behaved coldly towards him and seemed resentful of his presence. Encik M then checked with his colleague if he has informed Mr. K of his reason for not attending the company's programmes, and got an affirmative reply. Nevertheless, since then Mr. K was unfriendly towards Mr. M, who was totally at a loss as to the reason. Encik M became unhappy about coming to work and did not know what could be done to improve the matter.

The Perspective of Korean Collectivistic Values. When the Korean management announced any programme or event, the management expected not only good attendance but a perfect one. Although top management did not compel workers to attend the department dinner or gathering among colleagues, Korean superiors usually expect all the workers to attend the occasions for the purpose of induction, ice breaking and the fostering of intimacy between workers though they were outside of the office hours. The thinking of the Koreans reflects the following motifs: i) the lack of participation, enthusiasm or support for company events undermines or obstructs group solidarity, ii) company duty or responsibility should be accorded top priority, iii) worker's complacent or non-committal attitude cannot be excused. In

this regard, therefore, the top management considered Encik M as an employee who did not appreciate the need for solidarity in the company. Korean management, as well as Korean workers, failed to understand why Encik M always cared more for his personal matters than his obligations to the company, and endorsed Mr. K's response to the affair fully. For the Korean management and workers, Encik M's attitude in giving priority to family matters at the expense of company's affairs could be interpreted as being individualistic, a behaviour capable of endangering company solidarity.

Besides, the Korean management and Korean workers attached a particular meaning to the department dinner, seeing it as an occasion for intimacy between Malaysian and Korean workers, since Korean workers and management seldom interacted at a personal level with Malaysian workers during office hours. The Korean management then saw workers' participation in company events as one of the criteria of their loyalty to the company. Even when an employee had a pressing family matter as in the case of Encik M, the employee was expected to accord greater priority to company matter. When an employee seldom support company events, pleading excuses of personal matters like family, he would be seen as being selfish, manifesting individualism of the kind which affects company solidarity. Such employee would be seen as relegating his work obligations and very much wanting in the sense of belonging to the company.

The Perspective of Malaysian Collectivistic Values. Over the same incident, the interpretation of Malaysian workers is far different from that of Korean workers and management. Malaysian values on solidarity are more flexible in accommodating exigencies and exceptions. Hence, the poor attendance of some individuals in the above case is excusable or understandable to Malaysian workers. Consequentially the strict order or compulsion of the Korean employer for workers to attend company events can be a source of stress or tension for Malaysian workers. Malaysian workers fail to understand that such expectations are part of Korean management, which to them seems to be excessive and coercive. Besides that Malaysian workers hope that the top management would consult them in advance before fixing the date and place of company events such as gatherings, dinners or other functions.

Malaysian values place considerable importance on the participation of all in such decisions, which should be arrived at by consensus, be it even in trivial matters. In such an atmosphere, the Korean top management should not expect Malaysian workers to participate in company's activities willingly and enthusiastically. Besides this, for Malaysian workers, a healthy family life, and strong relationships among family members are of the utmost importance, transcending career considerations or work obligations. Hence, to them, family obligations can be a compelling enough reason for being unable to attend company activities such as dinner functions or other social gatherings. With such reasoning on their part, the Malaysian worker involved in the above case fails to understand the reluctance of his Korean boss to accept his apology for his omission.

Case 2: Conflicting Idea of Loyalty and Sense of Belonging

Mr. K who has been working in Malaysia for two years as a manager in the department of human resources has trained Encik M, one of his inexperienced subordinates into an efficient and skilled worker ever since Encik M first joined the company as a fresh graduate. Mr. K has spent much time and energy mentoring Encik M to adapt to the Korean corporate culture and assimilating some of its values. Mr. K's investment in Encik M however, went wasted, when Encik M quit to join another company offering better terms and career advancement. This made Mr. K. feel that Encik M did not value their relationship nor appreciate what he has done for him. Such disappointment has hit Mr. K. twice before. Mr. K was exasperated and felt unsure if he could trust or rely upon his local subordinates anymore. It seemed to him that they did not have any loyalty to the company and were primarily motivated only by their personal interests.

The Perspective of Korean Collectivistic Values. There are many cross-cultural misunderstandings or conflicts arising from the differing perceptions of loyalty and sense of belonging felt by workers in the employment of the Korean company. In this regard, many Korean respondents express

disappointment and distrust of Malaysian workers in terms of the Malaysian workers' loyalty and sense of belonging to the company. In part, this disappointment is caused by the Koreans' expectations that Malaysian subordinates should subscribe to the ideal of life-long employment that they aspired to. This ideal is one of the primary core values of South Korean corporate culture, integrally bound with the idea of the lifelong workplace. When South Korean workers start their working life in a company, most will try to work in the same organization for their entire working life (Kim & Kim, 1996, pp. 33-34; Cho & Park, 1998). This element in the social values of Koreans integrally binds workers life and interests with the fate of the company, in reciprocation of the company's expectation that workers be loyal or have a deep sense of belonging to it. Based on this bound interests between workers and the company, South Korean corporations normally afford many opportunities for staff to upgrade their skills and qualifications through educational or vocational programs in the forms of workshops, courses, and seminars, both theoretical and practical. This is the company's way of investing in its future through their workers' development.

The loyalty of Korean workers to their organizations has been widely acknowledged in management or administrative studies. Emphasizing complex values like loyalty and zeal in upholding a good reputation and corporate image, the company expects workers to place the company first before

self and workers, generally live up to this expectation (Lee, 2001). Consequently, from the perspective of South Korean workers, Malaysian workers would appear to be lacking in loyalty or sense of belonging to the company since they are generally more inclined to give priority to personal or career advancement in breach of the lifelong workplace value. To the South Koreans Malaysian workers switch companies too readily due to the lure of better salaries and perks, with no sense of gratitude to the company which has invested in them, hardly reciprocating the company with lasting loyalty and sense of common destiny.

The Perspective of Malaysian Collectivistic Values. To the thinking of Malaysian workers, the company is essentially a source of income for themselves and their families. Should the company's business prosper, they feel proud and pleased without planning, however, to work for the company 'rain or shine' for their entire life. Should there be better opportunities elsewhere, they would consider taking them up without feeling guilty of being unfaithful or disloyal to the company, as South Korean workers would be inclined to feel.

Although they are more amenable to switching companies, it cannot be said however that Malaysian workers are entirely driven by salary consideration. Besides monetary considerations, they do give serious considerations to the working atmosphere or social relationship when choosing their workplace, whether it is

harmonious or amicable.[11] For Malaysian workers, a good relationship takes greater precedence over abstract company objectives and interests. This explains why Malaysian workers are more inclined to develop personal loyalty to superiors who take personal interests in their welfare rather than to the company in an abstract and impersonal sense. Tactful relationship with people at the personal level is an important value emphasized by the Malaysian form of collectivism, in contrast to the values of the Western industrial capitalistic societies which are inclined to define success and achievement rather in individualistic terms (Sinaga, 1998, p. 42).

Most Malaysian workers in the South Korean company feel their chance of promotion is very slim due to the presence of a 'glass ceiling' within the company structure, which sees to it that the higher positions are filled by South Koreans, while the lower positions are given to Malaysian workers. This could be one of the reasons why Malaysian workers feel demoralized and lack a sense of loyalty or the sense of belonging to South Korean companies. Besides the issue of promotion, Malaysian workers also feel that they are not involved in the decision-making process of the company. In their thinking, 'If we are not given the right to participate in the decision- making and cannot voice our opinions through any legitimate channel,

the management should not expect us to be loyal or feel a deep a sense of belonging to the company as it is inconceivable to us that the company's future is our future too', expressed a Malaysian respondent succinctly.

DISCUSSION

The conflicting perspectives of the two groups reflect the differences in their collectivistic values. Even as both value systems emphasize the ideal of solidarity and harmony, there are major differences in their very conception of solidarity and the mechanism of achieving it. Firstly, the conception of solidarity in the South Korean values places much emphasis on uniformity whilst that of the Malaysian accommodates heterogeneity and variations of solidarity. In many incidents in the South Korean company, the management hardly entertains any excuses or exceptions. This orientation in their social values reflects the Korean form of collectivism, which is determined by the masculine culture (Ahn, 1996; Hofstede, 1980) and homogeneity of their society. This is further reinforced by elements of the military culture, pushing Korean collectivism to lay excessive emphasis on solidarity excessively.[12]

This element of uniformity is a distinctive feature of some homogeneous societies like

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[11]To their thinking, an agreeable working atmosphere should be characterized by good relations among workers, including between superiors and subordinates (Jamaliah, 1996, pp.10-11).

[12]As it is compulsory for most Korean men to enlist for national service for 2-2.5 years, most Korean workers would have gone through military training, a conditioning which makes it difficult for Korean workers to accommodate exceptions and exigencies at the workplace.

Korea and Japan, with their particular social, historical background deeply rooted in sole ancestry, culture, language and social values. In such homogenous societies, if the majority adopts a certain stand, the rest of society would unconsciously or readily comply just for the sake of preserving uniformity. Triandis and Suh (2002, pp. 133-160) assert that homogeneity makes a culture 'tight' in the sense that its members have a barrage of rules and norms regulating behaviour and punishing deviation. This aspect of collectivism in the Korean society was discussed by Saccone (1994, p. 24), who noted that Koreans generally tend to accede to a group's decision for the sake of achieving uniformity among them. Such tendency engenders a sense of security or belonging among members of the society or organization.

The collectivistic values of Malaysian workers reflect more flexibility and inclusiveness or open-mindedness in accepting diversity or exceptions even as they emphasize solidarity in any social grouping, community, or organization. The collectivistic values of Malaysian workers have been influenced by a heterogeneous society with a multi-racial and multi-cultural background. These backgrounds are therefore, more accommodative of the differences and diversity that exist among them. The collectivistic values of Malaysians tend to privilege 'moderation' in any situation, neither keen standing out nor be ignored. This self-effacing preference for moderation does mean however that Malaysians seek to uphold uniformity the way South Korean companies do.

Secondly, the collectivistic values of Korean company prescribe strict and tough measures in ensuring solidarity while the collectivistic values of the Malaysians enjoin that solidarity is achieved through voluntary participation and consultation among members for the sake of group harmony. In the South Korean company, if an individual does not comply with the majority's decision he or she would be marooned or ostracized for his or her selfishness. Generally, the majority of South Korean workers feel socially compelled to accede to the decisions of their superiors and colleagues, although personally, they may not approve of the decision. This can be attributed in part to the influence of the masculine culture which frowns upon deviances, seeing them as going against society's interests.

Meanwhile, the collectivistic values of the Malaysian workers prescribe milder methods of achieving solidarity through mutual understanding, accommodation, and consensus, in line with its desire for harmonious relations. The collectivistic values of Malaysian workers can be said to emphasize the expectations and interests of the majority in an organization or community, no less than the South Koreans. Nevertheless, the collectivistic values of Malaysian workers are less authoritarian or compulsive in the sense that they are more accommodative of the interests and feelings of the individuals, always encouraging group consultation.

Hence, there is a marked difference in the conception of solidarity and the mechanism of achieving it between the Korean collectivistic values and that of the Malaysians. This differing idea of solidarity is a constant source of tension and frustration for Malaysian workers working in South Korean companies with its more authoritarian demands. The Korean insistence on uniformity and regimentation is alien to the experience of Malaysian workers based on their own culture.

Different social groups define the work-situation differently based on their value premises. The divergence in their definition of work-situation can clearly be seen through two motifs, namely: i) perception of the occupation and workplace, ii) the object of loyalty. South Korean and Malaysian workers differ in their perceptions of the workplace and occupation. The South Koreans show strong loyalty and identification towards their occupation and workplace compared to Malaysian workers. The Koreans are capable of conceiving the idea of lifelong workplace while for the Malaysian workers, a workplace is basically a means of livelihood, a source of income. In this respect, South Korean workers are generally considered as faithful or devoted to their companies since they are inclined to adopt their workplace as part of their lifetime commitment as noted by various researchers (Bae & Chung, 1997). Consequentially, they observed that South Korean workers are quite willing to make personal sacrifices for the sake of the company. There have been some changes, however, in the attitudes

of South Korean workers since the South Korean financial crisis of 1997.[13]

Notwithstanding this shift, it can still be said that South Korean workers generally work hard for self-gratification and getting the company's acknowledgement of their capabilities. The collectivistic values of South Koreans still regard occupation not simply as contractual but more as a symbiotic membership of an organization, along with its hierarchy of relationship based on loyalty between the superiors and the subordinates (Lee, 2000). Hence, whenever they work in a company they cultivate a sense of ownership and belonging, though not as strong as before the financial crisis. According to Lee (2001), South Korean workers do not work solely for their salary but also in pursuit of their dream or ambition of getting the organization's recognition. This motivates them to give their best in the performance of their tasks. They work diligently even to the point of neglecting their personal interests, including their family matters, for the sake of advancing their career through their work performance.

The form of loyalty Malaysian workers show to their superiors and colleagues is more of the personal type, analogous to the kind they feel towards family members or their community. For instance, Malaysian workers may be personally loyal to senior executives who show genuine concern for

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[13]During the crisis many Korean companies had to lay off workers who identified their security and future with the companies, therefore worked hard towards achieving company goals. The experience of being laid off caused many workers to be disillusioned with the idea of 'lifelong work place'.

their welfare and interests, whom they would consider as befitting of their conception of good leaders. The corporation or the business organization is far too abstract to be the object of loyalty for Malaysian workers, which then tends to be personified in the persons of superiors. As has been stated, a company is seen essentially as a source of income, a livelihood for workers and their family. Although working for a company or corporation can be a source self-gratification to Malaysian workers, the company cannot by itself be an object of devotion, giving meaning to his life in a fundamental way.

The collectivistic values of Malaysian workers accord higher priority to family and community compared to company matters. Consequently, although Malaysian culture has been categorized as collectivism along with the South Korean culture, Malaysian workers do not share the South Korean's idea of the company as an object of loyalty and devotion beyond a mere paymaster. Malaysian workers usually give priority to family matters over company demands, particularly after office hours. As economic beings, they give due regards to company matters up to a point, while as social being they remain devoted to the family and the community. South Korean workers, on the other hand, are able to give priority to the company because as both economic being and social being, they can identify themselves with it (Aron, 1968; Mills, 1959).

There are several social-historical factors for the inability of Malaysian workers to develop corporate loyalty in a more abstract sense beyond personal loyalty towards caring superiors or seniors. Basically, the Malaysian masses have been exposed to the industrial-capitalistic ethos in a significant way only recently, relatively speaking (Alatas, 2009; Asma, 2001; Khaliq, 2005; Maaruf, 2014; Sinaga, 1998).

It is clear then that though both Koreans and Malaysians subscribe to the values of collectivism, invariably their definition, object of loyalty and collective interests differ radically. For South Koreans, it is fundamentally the company, while for Malaysian workers what remains uppermost in their scale of values is the family or their community (Blunt & Jones, 1992; Daria, 2015; Khaliq, 2005; Liu, 2012; Norma, 1998). This difference is captured and elaborated by House (2004) in his approach to the different types of collectivism, namely institutional collectivism and in-group collectivism. The South Korean workers being researched did not, however, manifest many individualistic traits. Instead, they emphasized the 'stern' collectivistic line aimed at forging solidarity and loyalty among them. Their organization-oriented collectivistic culture transferred loyalty from family and local community to their corporate organization. Consequently, they generally develop a strong sense of belonging and ownership with regards to their organization and identify their fate with that of their corporate organization.

Although both the South Korean and Malaysian culture have been listed as belonging to the same category of collectivism, in reality, they have each

evolved differently, given their different social and historical background. In the process of industrialization and economic growth, these Asian societies have evolved and adapted their collectivistic values according to their own socio-cultural history or existential conditions. In this process of cultural adaptation or adjustment, both South Korean and Malaysian collectivistic values have synthesized themselves with other influences which are compatible or harmonious with their basic orientation, forming their respective distinctive variation. The outlook of South Korean workers and management reflects how it selectively merged collectivistic values with Confucianism, hierarchical principle, militaristic or authoritarian values, and secular influences. Consistent with the values of Confucianism, Korean workers takes full responsibility for their work and its outcome and this Confucian teaching on the ethic of hard work is not solely confined to the advancement of personal interests but also towards serving the interests of organization and one's society or nation.[14]

On the other hand, the outlook of Malaysian workers shows how it blended collectivistic values with consensual, feminine, and Islamic elements. This has moulded the collectivistic values of Malaysian workers towards the orientation of relationship-oriented horizontal collectivism with its emphasis on inter-relationship

of members. This is in marked contrast to South Korean collectivistic values, which strongly indicates the features of organization-oriented vertical collectivism with its emphasis on the organization and its missions.

CONCLUSION

The findings of this study show that most South Korean workers and top management have transferred their homeland corporate culture[15] and have implemented it in a new environment in Malaysia whilst most Malaysian workers manifested strong tendency to preserve their own culture even after joining the South Korean multinational company.

The South Korean management emphasises the 'tough' collectivistic cultural values in order to forge solidarity and loyalty among themselves. Their 'organization-oriented' collectivistic culture transferred the objective of loyalty from family and local community to their corporate organization. Consequently they generally develop a strong sense of belonging and ownership with regards to their organization and do identify their fate with that of their corporate organization.

In this study, the South Korean management bringing along their cultural baggage, endeavours to instil South Korean collectivistic values in their new staff.

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[14]Shin (2000) thinks that Korean workers generally attribute failure to their own mistakes or omission, and traced this predisposition to the teachings of Confucianism which see failure as accruing to the lack of efforts, volition and spiritual strength.

[15]The Korean corporate culture believed that it has unique characteristics including being masculine, rigid, military style, collectivistic, authoritarian, hierarchical, high uncertainty avoidance, and formal relationship among member. (Cho & Park, 1998; Han, 2003; Kim, 1995; Lee, 2001; Shin, 2000)

Through various forms of organizational socialization[16], South Korean management strives to communicate shared values, norms, practices, and rules to fresh recruits, hoping to fit them into their roles of achieving the organization's goal, as Barley and Kunda (1992) has elaborated. As new comers to the organization, Malaysian workers make an effort to adapt to the new experience. The collectivistic values of the Malaysian workers', however, is incongruent with that of the South Korean since it is of the human-oriented variety as discussed in the above conflict cases. By virtue of its emphasis on the humanistic concerns, this variety of Malaysian collectivistic values has also been described as relationship-oriented (Norma, 1998), and group-oriented (Jamaliah, 1996, pp. 10-11). This incongruent situation might have caused some challenges for the Malaysian workers, and South Korean management as well when they needed to be re-socialized.

Group identities that focus on group exclusiveness, or world-views molded by particular historical context, can develop such rigidity of cultural form and style that make them misfits in an intercultural or multinational situation. In this respect,

[16]Examples of the unique characteristics include: i) The Korean Company offers a week-long orientation for new staff to provide an introduction to the company's corporate visions, missions, philosophies, mottos and regulations. ii) The company prepares Korean language and Korean culture classes in order to help the staff to adjust to the Korean corporate culture iii) Malaysian workers are given many opportunities to attend workshops and seminars which are organized by the headquarters either in Korea or Malaysia.

perhaps Koreans should reflect on their insistence on 'organization-oriented' culture, while the Malays should face the reality that they are embracing the industrial ethos, and therefore should endeavour to neutralize the conditioning effects of their past non-industrial or traditional economy within the corporate situation.

To ensure this optimal collaboration in this South Korean Company, the encounter of two different types of collectivism should be benefited to generate new adjusted and modified collectivistic corporate culture, invented from the mutual understanding, readjustment and adaptation to each other in a process of compromise and negotiation. This unique and customized collectivistic culture should contains some integral values that are indispensable and prerequisite to cross cultural collaboration, such as inclusiveness, resilience, open-mind, reciprocal, and mutual respect; this 'glocalized ' corporate culture enables two parties to minimize the conflicts while reinforcing optimal collaboration and harmonious atmosphere among the workers with various backgrounds.

The South Korean management as a policy maker and South Korean as well as Malaysian workers who have direct contact with other cultures might find this study useful in order to forge better collaboration. This study allows for an appreciation of the root of conflicts between the corporate cultures. The findings could reduce possible misunderstandings or conflicts between the South Korean top management, employees, and Malaysian employees as it could form

mutual understanding between the two unique and synthesised collectivistic values. This improved understanding of cultural diversity could facilitate better synergy, resulting in more conducive working relations between them.

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REFERENCES

Adler, Nancy J. (2002). *International dimensions of organizational behaviour (4th Ed)*. Cincinnati, Ohio, USA: South-Western.

Ahn , Seong Won. (1996). *The Difference of Masculinity and Femininity in Korea. Japan the U.S.15* MBA thesis. Yonsei Graduate School of International Studies. December.

Alatas, S.H. (1977). *The Myth of the Lazy Native*, London : Frank Cass

Aron, Raymond. (1968). *Progress and disillusion*. London : Pall Mall P .

Asma, Abdullah. (2001). Understanding the Malaysian Workforce: Guidelines for Managers. Kuala Lumpur: Malaysian Institute of Management.

Bae, K., & Chung, C. (1997). Cultural values and work attitudes of Korean industrial workers in comparison with those of the United States and Japan. *Work and Occupation 24(1)*: 80-96.

Barley, Stephen R. and Kunda, Gideon. (1992). Design and devotion: Surges of rational and normative ideologies of control in managerial discourse. *Administrative Science Quarterly, 37*, 363-399.

Bhaskaran and Sukumaran. (2008). National culture, business culture and management practices: consequential relationships? *Cross Cultural Management: An International Journal, 14(1)*: 54-67.

Blunt, P. & Jones, M.L. (1992). *Managing organizations in Africa*. Berlin: Walter de Gruyter.

Bond, Rod and Smith, Peter. (1996). Culture and Conformity: A meta-analysis of conformity studies using an Asch's (1952b, 1956) line judgment task. *Psychological Bulletin, 119(1)*: 111-137.

Bunchapattanasakda, C., & Wong, P. (2010). Management practices of Chinese managers in Chinese MNCs operating in Bangkok. *Cross Cultural Management: An International Journal, 17*(3), 268-282.

Cho, Y. H., & Park, H. (1998). Conflict management in Korea: The wisdom of dynamic collectivism. *Conflict management in the Asia Pacific: Assumptions and approaches in diverse cultures*, 15-48 . Singapore: John Wiley and Sons.

Choi, Bond Young. (1996). *Hankukineu Sahoijeok Seongkyeok (Social Characteristics of Koreans)*. Seoul: Neuti Namu.

Choi, Jae Seok. (1994). *Hankukineu Sahoijeok Seongkyeok (Social Characteristics of Koreans)*. Seoul: Hyuneumsa.

Daria, G., Mary, M. J., Geoffrey, H., & Ruth, S. (2015). Understanding Cultural Differences in Ethnic Employees' Work Values: A Literature Review. *American Journal of Economics 5(2)*, 112-118.

Fatimah Daud. (1983). *Socio-Economic Problems of Women Workers: A Case Study of Electronics Workers in a Multination Japanese Firm* (Unpublished Ph.D. thesis), University of Malaya, Malaysia.

Fernandez, Denise Rotondo, Carlson, D. S., Stepina, L.P. and Nicholson, J. D. (1997). Hofstede's

Country Classification 25 Years Later. *The Journal of Social Psychology, 137(1)*: 43-54.

Fontaine, R., & Richardson, S. (2005). Cultural Values in Malaysia: Chinese, Malays and Indians Compared. *Cross Cultural Management: An International Journal*, *12(4)*:63-77.

Gabriel, S., & Gardner, W. L. (1999). Are There "His" and "Her" Types of Interdependence? The Implications of Gender Differences in Collective and Relational Interdependence for Affect, Behaviour, and Cognition. *Journal of Personality and Social Psychology*, *75*, 642-655.

Hall, Edward T. (1976). *Beyond Culture.* New York: Doubleday.

Han, Geon-Soo. (2003). African Migrant Workers' Views of Korean People and Culture. *Korea Journal* Spring: 154-173.

Hofstede, Geert. C. (1980). *Culture's consequences: International Differences in Work-Related Values.* London: Sage Publications.

Hofstede, Geert Jean, Pedersen, P.B. and Hofstede, Geert C. (2002). *Exploring Culture: Exercises, Stories and Synthetic Culture.* USA: Intercultural Press.

House, R.J., Hanges, P.J. Javidan, M., Dorfman, P.W. and Gupta, V. (2004). *Culture,   Leadership and organizations: The Glove study of 62 society.* Thousand Oaks, CA : Sage Publication.

Jamaliah Mohd. Ali. (1996). "Cross-cultural communication: A case study of German companies in Malaysia." Paper presented at European business ethics networks; Annual conference 9th, Frankfurt, Germany, September 18-20.

Kagitcibasi, C. (1987). "Individual and Group Loyalties: Are They Compatible?" In *Growth and Progress in Cross-Cultural Psychology.* ed. Kagitcibasi C., 94–104. Lisse, Netherland: Swets and Zeitlinger.

Kearney, R. P. (1991). *The Warrior Worker: Challenge of the Korean Way of Working.* New York: Henry Holt and Company.

Kenneth, R. G. and Kimball, P. Marshall. (1998). Kenyan and Korean management orientations on Hofstede's cultural values. *Multinational Business Review, 6(2)*: 79-88.

Khaliq Ahmad. (2005). *Malaysian Management Styles: Policy, Practice and Human Resource.* London: ASEAN Academic Press.

Kim, Keum Hyun. (2008). *Konflik Nilai Sosial di kalangan Pekerja Melayu in Syarikat Multinasional: Satu Kajian Kes di Syarikat Korea (Social Value Conflicts of Malay Workers in a Multinational Company)* (Ph.D. Thesis). University of Malaya, Malaysia.

Kim , Kwang-Ok. (1996). The Reproduction of Confucian Culture in Contemporary Korea: An Anthropological Study. In *Confucian Traditions in East Asian Modernity: Moral Education and Economic Culture in Japan and the Four Mini-Dragons.* ed. Tu Sei-Ming. Massachusetts: Harvard University Press.

Kim , Shin. (1995). *Hankuk Kieop Haeoi Kyungyoung (International Management of Korean Firms).* Seoul: Seok Jung.

Kim , Un-Yong, & Kim, Eun Young. (1996). *A Cross-Cultural Reference of Business Practices in a New Korea.* Westport, Conn.: Quorum Books.

Kumar, K., & Kim, K. Y. (1984). The Korean manufacturing multinationals. *Journal of International Business Studies*, *15*(1), 45-61.

Lee, Hak-Jong. (2001).*Hankuk Kieopoe Munhwajeok Tteukjingkwa Sae Kieop Munhwa Kaebal (The Characteristics of Korean Corporate Culture and the Development of New Corporate Culture).* Seoul: Pakyoungsa.

Lee, Jang Ro, & Shin, Man Soo. (2000). *Hankuk Kieopeu Sekye Kyeongyoung (The Global*

Management of Korean Enterprise). Seoul: Korea University.

Leung, K., & Tjosvold, D. (1998). *Conflict Management in the Asia Pacific: Assumptions and Approaches in Diverse Cultures*. Singapore: John Wiley and Sons.

Liu, Y. (2012). The Perceived Importance of Cultural Priority for Global Business Operations: A Study of Malaysian Managers, *Research and Practice in Human Resource Management, 20(1)*, 57-65.

Maaruf, S. (2014). *Malay Ideas on Development: From Feudal Lord to Capitalist.* Petaling Jaya: Strategic Information and Research Development.

McSweeney, B. (2002). Hofstede's model of national cultural differences and their consequences: a triumph of faith –A failure of analysis. *Human Relations, 55(1)*, 89-118.

Mills , C.Wright, (1959). *White Collar: American Middle Classes,* London: Oxford University Press.

Norma Mansor. (1998). "Managing Conflict in Malaysia: Cultural and Economic Influences." In *Conflict Management in the Asia Pacific: Assumptions and Approaches in Diverse Cultures*. eds. Kwok Leung and Dean Tjosvold, 147-166. Singapore: John Wiley and Sons.

Railton P. (2003). *Facts, values and norms: Essays toward to a morality of Consequences*. Cambridge: Cambridge University Press.

Rashid, M. Z., & Ibrahim, S. (2008).The Effect of Culture and religiosity on Business Ethics: A cross-cultural comparison. *Journal Business Ethics, 82*(4), 907-917.

Robbins, S. (1993). *Organizational Behaviour* (6th ed.). New Jersey, US: Prentice Hall.

Saccone, R. (1994). *The Business of Korean Culture.* Seoul: Hollym.

Schwartz , S. H. (1994). "Beyond individualism and collectivism: New cultural dimensions of values." In *Individualism and collectivism: Theory, method and applications,* ed. Kim U, 85-122. London: Sage.

Schwartz, S. H., & Bardi, A. (2001). Value hierarchies across cultures: Taking a similarities perspective. *Journal of cross-cultural Psychology*, *32*(3), 268-290.

Sendut, H. (1991). Managing in a multicultural society: The Malaysian experience. *Malaysian Management Review,* 26, 61-69.

Shamsul, A. B. (1986). *From British to Bumiputera Rule: Local Politics and Rural Development in Peninsular Malaysia.* Singapore: Institute of Southeast Asian Studies.

Shin, Man-Su. (2000). *Hankuk Gieopeo Kukje Kyungyoung (International management of Korean Enterprise).* Seoul: Korea University Press.

Sinaga, S. H. (1998). *Global Bridges: A Comparative Study of the Cultural Values of China, Malaysia and The United States* (Unpublished PhD. Thesis). The Union Institute Cincinnati, Ohio.

Smith, P. B., Dugan, S., and Trompenaars, F. (1996). National culture and the values of organizational employees. *Journal of Cross-cultural Psychology, 27*, 231-265.

Syed Husin Ali. (1979). *Apa Erti Pembangunan (What is the meaning of Development).* Kuala Lumpur: Dewan Bahasa dan Pustaka.

Syed Hussein Alatas (2009). *Mmitos Peribumi Malas.* Kuala Lumpur: Dewan Bahasa dan Pustaka.

Triandis , H. C. (1994). Theoretical and methodological approaches to the study of collectivism and individualism. In *Individualism and collectivism: Theory, method and applications, ed.* U. Kim, 41-51. London: Sage.

Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology, 74*(1), 118-128.

Triandis, H. C., & Suh, E. M. (2002). Cultural Influence on personality. *Annual Review of Psychology, 53*: 133-160.

Trompenaars , F., & Hampden-turner, Charles. (1993). *Riding the Waves of Culture: Understanding Cultural Diversity in Business.* London: Nicholas Bearley Publishing.

Dynamic Interactions in Macroeconomic Activities

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ABSTRACT

This paper empirically investigates the dynamic interaction of macroeconomic activities for the ASEAN 5 (Indonesia, Malaysia, the Philippines, Singapore, and Thailand) with consideration of the asymmetric adjustment in this interaction. Both the short and long-run interactions were modelled during 1960-2014, and there were differences for each country based on data availability. The empirical results of the analysis were based on time series data and are summarized as follows: i) Indonesia and the Philippines had no evidence for cointegration; ii) among those countries, it was found that only Malaysia has asymmetric adjustment regarding cointegration; iii) money supply responded only to positive shocks while the interest rate responded only to negative shocks; iv) only unidirectional causal relationship was found in the long-run and short-run methods. Based on the results, the wisest operating target for Indonesia and Thailand is inflation targeting. Monetary aggregate targeting would be the recommended operating policy for the Philippines and Singapore. Malaysia should implement exchange rate targeting and intervene in the money supply (when there is a negative shock) and in the interest rates (when there is a positive shock).

Keywords: ASEAN 5, Asymmetric adjustment, intermediate targeting, operating targeting

INTRODUCTION

For a long time, economists (e.g., Friedman, 1995; Poole, 1970; Mishkin & Savastano, 2001) were trying to find a variable that is easily controlled by monetary policy and related to economic activity on a stable basis. The greater the effect such a variable has on the behaviour of economic time series, the more effective a monetary policy is. To assist in the understanding of

these issues, the literature was searched for a simple characterization of the policy reaction function to summarize the monetary authority's behaviour in setting a policy.

The study of Masih and Masih (1996) summarized the differences of opinions among economists, such as the Classical, the Keynesian, the Monetarist, the New Classical, the New Keynesian and the Real Business Cycle, which had led to different macroeconomic paradigms. Here, the Classical and Real Business Cycle schools believe that monetary expansion cannot increase real output. In contrast, the Keynesians believe that an increase in money supply would increase both production and price levels. On the other hand, the Monetarist, New Classical, and New Keynesian perspectives only agree that monetary expansion affects national output in certain circumstances. From the view of the Monetarists and the New Keynesians, money expansion only increases output in the short run. The New Classical view argues that monetary expansion affects the output due to "unanticipated" economic agents.

The causal chain is defined among money and other macroeconomic variables, such as real gross domestic product (Y), money supply (M2), exchange rates (EX), consumer price index (CPI), and interest rates (I). Therefore, the causal chain implies that the existing macroeconomic paradigms still remain ambiguous. Following the previous literatures (e.g., Chen et al., 1986; Dhakal et al., 1993; Mukherjee & Naka, 1995), the goods market variables

considered are the Y and CPI. The money market variables considered are the M2 and I. The EX takes into account the foreign exchange market and the trade balance (Wongbangpo & Sharma, 2002).

Many macroeconomic variables incorporate nonlinear properties, especially in the area of business cycles (Falk, 1986; Neftci, 1984). We noted that testing for unit root and cointegration all have low power in the presence of asymmetric adjustment (Balke & Fomby 1997; Enders & Granger, 1998). However, previous studies did not capture the asymmetric adjustment in macroeconomic variables; hence, this study takes this a step further by examining the asymmetric behaviour of macroeconomics activities.

Figures 1 to 5 show the five macroeconomic variable series for the ASEAN-5. We find the goods market variables and money supply have linear increasing trends. However, we do not find any significant upward or downward trend in the interest rate and exchange rate series. These figures seem to exhibit some nonlinear adjustment patterns in the interaction of macroeconomic activities through money market or foreign exchange channels. This study contributes to the existing literature by improving and extending the previous related studies in two dimensions. First, this study takes research a step further by examining the asymmetric behaviour of macroeconomic activities by adopting threshold cointegration to capture asymmetric interaction among macroeconomics variables. Monetary
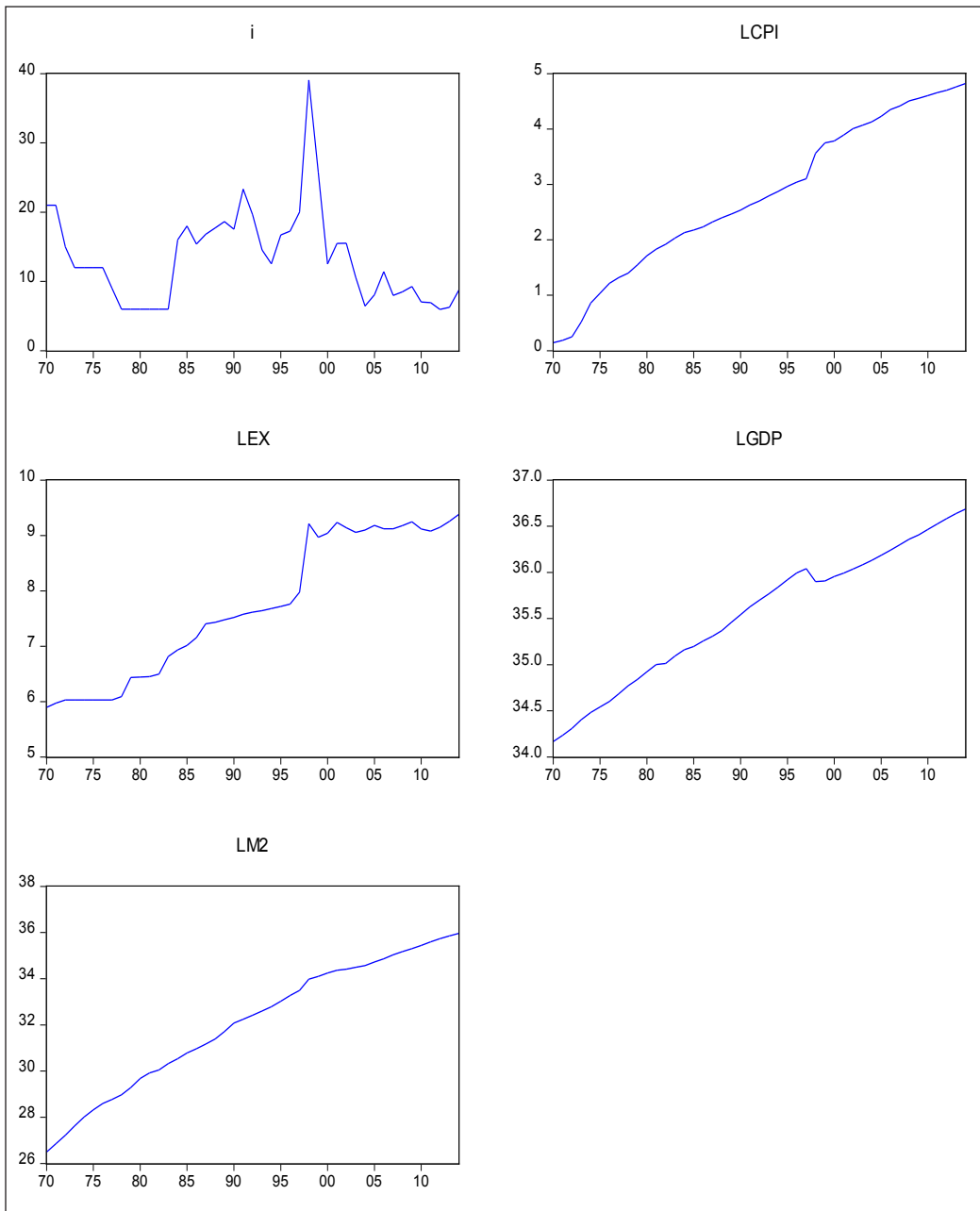
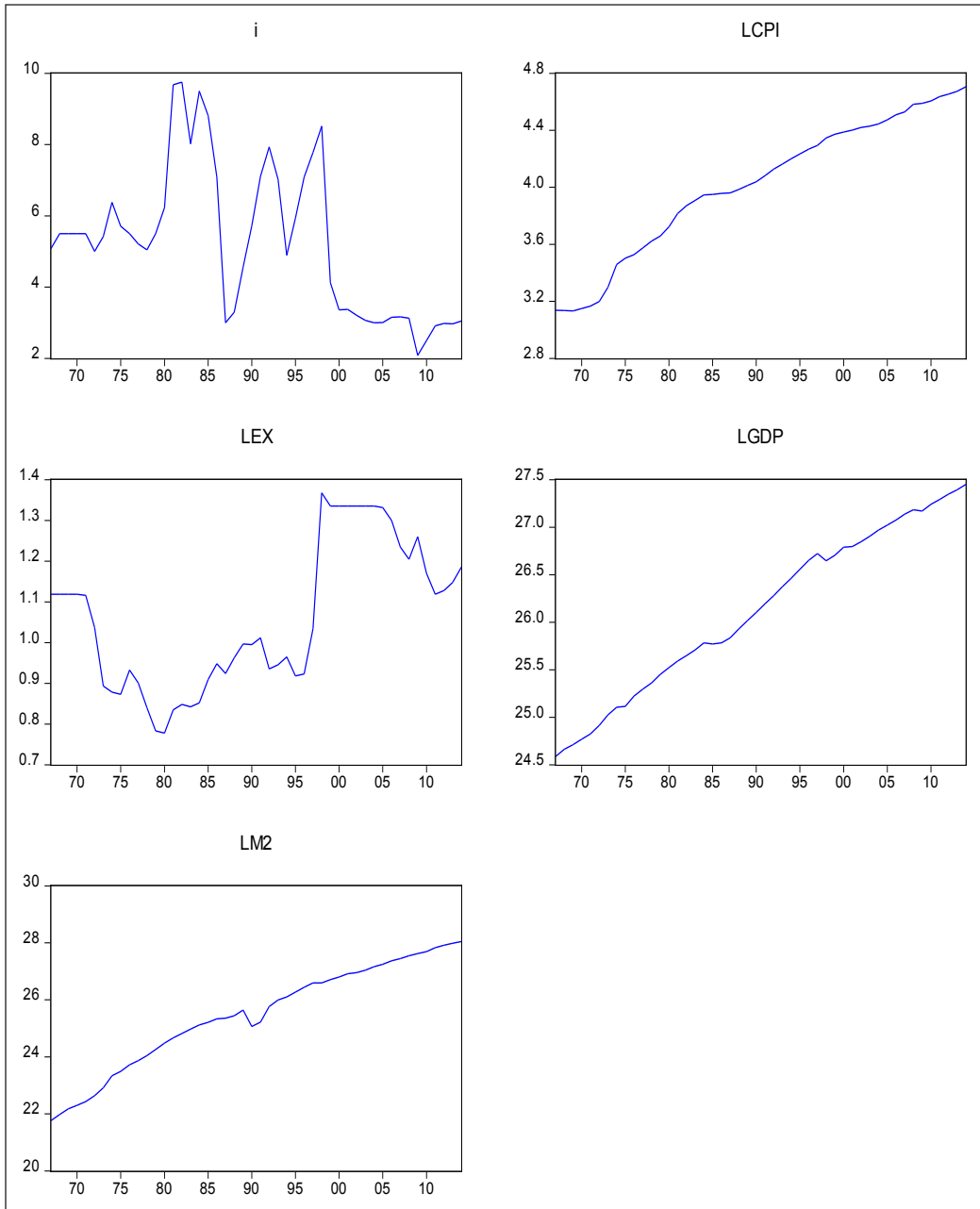*Figure 1.* Behaviour of the macroeconomic variables in Indonesia

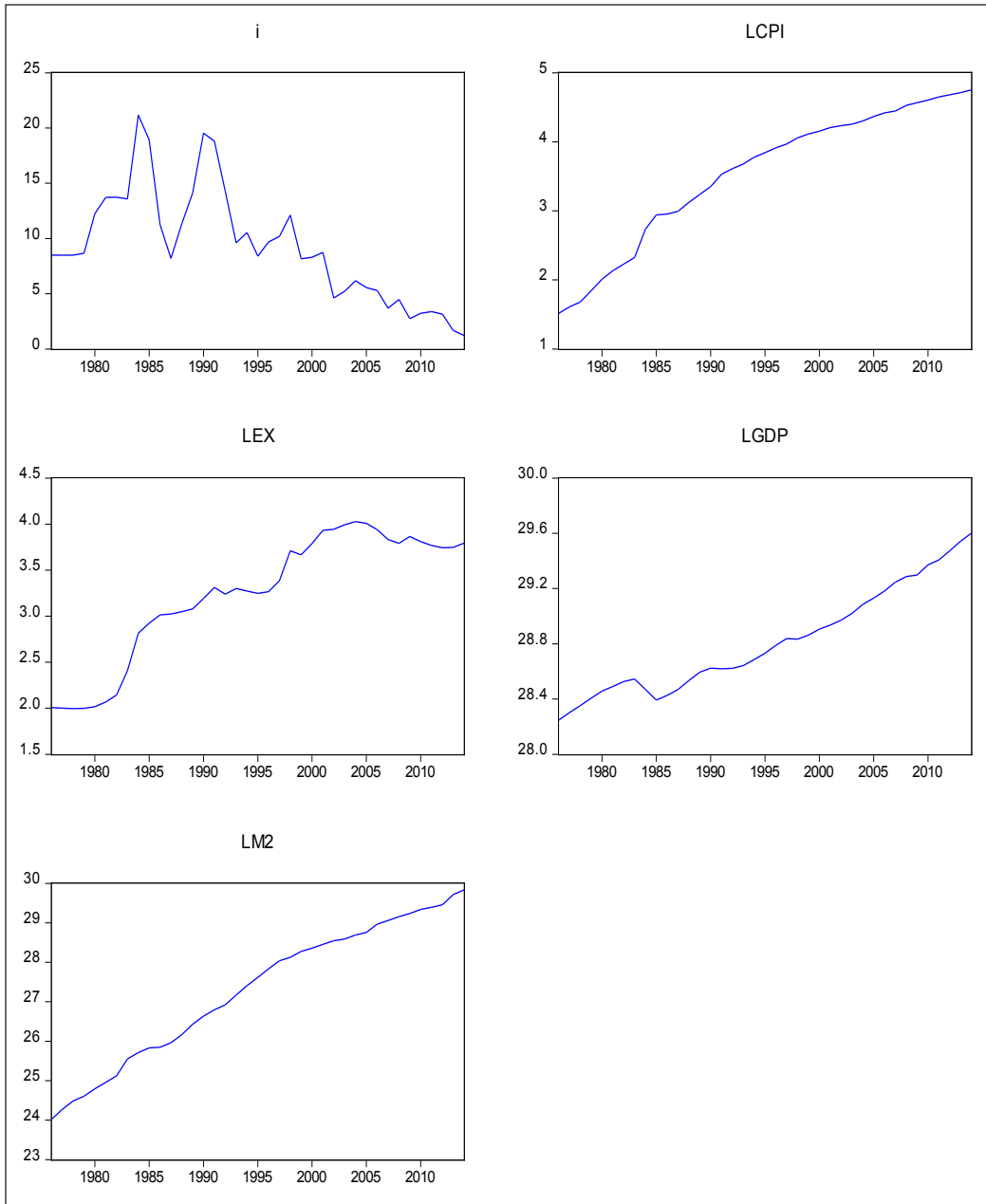*Figure 2.* Behaviour of the macroeconomic variables in Malaysia

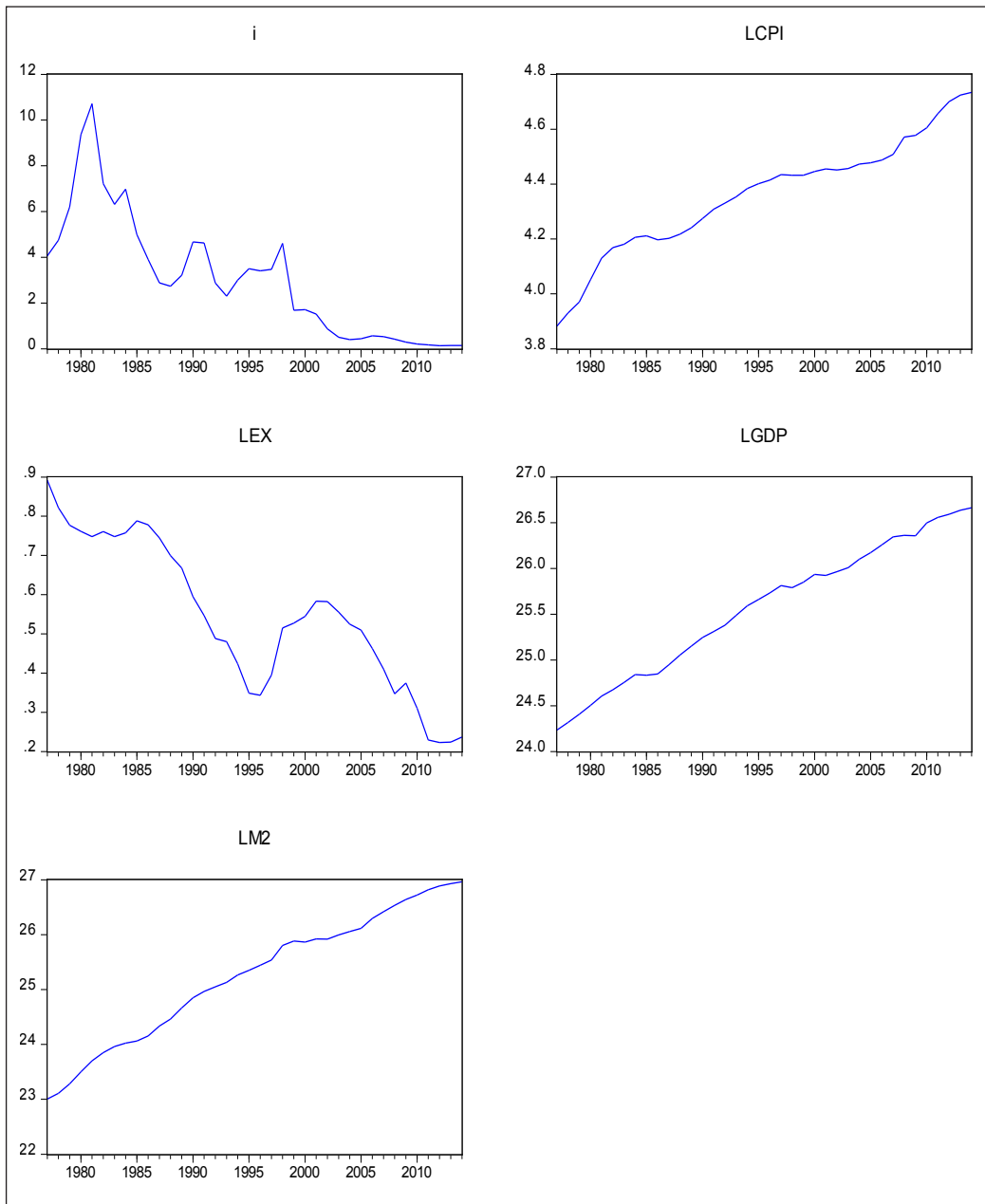*Figure 3.* Behaviour of the macroeconomic variables in Philippines

Figure 4. Behaviour of the macroeconomic variables in Singapore

Figure 5. Behaviour of the macroeconomic variables in Thailand

channels may be symmetric or asymmetric. Therefore, we also apply the model specification proposed by Ibrahim and Chancharoenchai (2014) in order to capture the different characteristics of channels. Second, Masih and Masih (1996) pointed out that the causality test of macroeconomic variables could justify the leading variable (affecting other variables but not influenced by other variables, in order word no causality). Based on this idea, this study extends the use of causality results in monetary implications, which helps to select the optimal operating and intermediate target in monetary policy.

This study focuses on the five major economies among Southeast Asian countries, Indonesia, Thailand, Malaysia, Singapore, and the Philippines, which are also known as the ASEAN-5. Based on Klyuev and Dao (2016), the ASEAN-5 has a relatively open capital account, which makes it challenging to control domestic monetary conditions and exchange rates at the same time. The experience of the ASEAN-5 can provide guidance to other developing countries in monetary policy setting.

The objective of this study is to investigate symmetric and asymmetric behaviour among macroeconomics variables, such as real gross domestic product (Y), money supply (M2), exchange rates (EX), consumer price index (CPI), and interest rates (I). This study would help policy makers to select the best operating targeting that aims towards sustainable economic development, and capturing the response of macroeconomics to difference shock is helpful for better policy making.

This study investigates the interactions among macroeconomic activities that would help policymakers select the best monetary targeting that aims towards sustainable economic development. Specifically, it answers the two following questions: First, does the asymmetric behaviour occur among macroeconomics variables in the ASEAN-5? Second, which variable is the optimal operating target and intermediate target in the ASEAN-5?

The rest of the paper is structured as follows. The next section will provide an overview regarding the monetary policy of the ASEAN 5 and related literature of this study. Section 3 presents the methodology. Section 4 describes the data and estimation results. The last section concludes with the main findings and their implications.

LITERATURE REVIEW

Recently, the literature on the relationship between macroeconomics variables and money increased because of the functions of macroeconomics variables and money giving clashing evidence between macroeconomic variables and money. A few studies (e.g., Masih & Abdul Karim, 2014; Tan & Baharumshah, 1999) used the causality test in order to acquire a causal link between variables. Some studies (e.g., Hossain, 2012; Masih & Masih, 1996) were conducted in order to investigate the empirical evidence behind the relationship between money, interest rate, output, exchange rate and price. Otherwise, scant studies in the context of the ASEAN 5 were implementing symmetric and asymmetric

factors in the analysis. This part of the study is aimed to review some of the literature on the relationship of macroeconomics variables and money.

Monetary Target and Goal

According to McCallum (1999), the advancement of monetary policy setting had gone from "rules" and "discretion" and was different from the school of thoughts, which poses perennial issues to central banks and policymakers. Though now, interest rates have become the favoured policy variable of most central banks in response to economic circumstances changes. However, the academic and political side has never intermittently explored other economic variables in order to achieve the economics "goal". McCallum defines that the "goals" refer to the ultimate but typically non- operational objectives of the monetary authority, and the term target refers to an operational variable that takes precedence in the actual conduct of policy. The economics goal usually stands for major macroeconomic achievements such as a low unemployment rate, low inflation rate, financial market stability or monitored exchange rate. According to Handa (2009), the central bank uses its tools to hit its operating targets, with the intention of manipulating the intermediate targets, which were the final ones of the financial system, in order to achieve its goals.

Moreover, the implication of causality tests, as Masih and Masih (1996) studies, would enable us to distinguish exogenous variables (no causal relationship with others) and endogenous variables (at least unidirectional causal relationship with others) in decision making progress, which in our cases is monetary policy targeting variables. Other studies such as Cioran (2014) show the empirical results emphasize a significant direct relation between the monetary policy interest rate and inflation, which make interest rates an efficient instrument for central bank to prevent inflation. Because Romania's inflation is susceptible to unexpected changes in the interest rate, a good alternative for companies would be to make decisions based on interest rate evolution forecasts. The result can also state that protecting interest rates is a lever for inflation targeting strategies.

Developing Countries

Previous studies focused more on one period of analysis of the causality among the variables. Masih and AbdulKarim (2014) had a study about the causal link of money, price, interest rates and output in a Nigerian context using data from 1970 to 2012. The result shows that the price and interest rate were the main variables, while utilizing the business cycle theory.

In a Malaysian context, according to Tan and Baharumshah (1999), they found that price had a Granger cause M2 through the short run channel. Moreover, the error correction model provided proof that the real income, price, and interest rate does impact M2 in the long run, while the real output, interest rate and M2 jointly cause price. Nevertheless, rather than joining the

other variables, the study did not provide the causal relation between money and price.

Indonesia was used as a sample by Masih and Masih (1996), and this study covered the period from 1955 to 1991. The methodology applied various econometric tests to capture the relationship among the variables. The findings exposed that the real output leads the money supply and the other three endogenous variables, in such a way that it is in support of the real business cycle theory (RBC).

In contrast, a case study in India by Masih and Masih (1996) supports the monetarist view that changes in income lead to changes in the stock of money through the demand for money in the short run. They significantly initiate that during the pre-economic crisis period, there is a stable long run cointegration relationship between those chosen under studies. The combination of the monetary variables was found to be neutral in the long run. However, the result of the post-economic crisis period exposes a well-defined long run equilibrium relationship among the variables. Money supply and real output were found to be neutral in the long run.

Some studies on the stock market and macroeconomics variables, such as Wongbangpo and Sharma (2002), look at the relationship between stock price and a set of the macroeconomic variable in the ASEAN-5 countries and the result shows stock price is positively related to growth in output and negatively to the aggregate price level. Stock prices have a negative relationship with the interest rate in the Philippines, Singapore, and Thailand, however, a positive relationship in Indonesia and Malaysia.

Adusei and Gyapong (2017)'s study outcome suggests that financial managers of national and multinational companies should be interested in the movements of inflation, monetary policy rates, current account balance, money and quasi-money supply per GDP, annual GDP per capita growth rate and total external debt. These variables may be used among other factors as inputs in arriving at economic decisions during trade agreements to maximize shareholders' wealth because results support the conclusion that the macroeconomic variables (inflation, monetary policy rate, current account balance, money and quasi-money supply per GDP, annual GDP per capita growth rate and total external debt) contribute to the continuous depreciation of the Ghana cedi against the U.S. dollar.

Developed Countries

During the transition period, Kotlowski (2005) analysed the long run causality between money and price in the context of Poland. The study applied the monetary inflation model, also known as the P-star model that was established by the FED economist, which used seasonal cointegration developed by Hylleberg et al. (1990). Their outcome proves the existence of the long run causal relationship between price and money, and these results follow the assumption in the P-star model.

Nonetheless, the analysis did not provide any seasonal cointegration relationship in the P-star inflation model that can be interpreted as the money demand equation.

Hossain (2012), modelled the narrow money demand in Australia. The result suggests the presence of a long run equilibrium relationship between real narrow money balance, real income, a representative domestic interest rate, and the nominal effective exchange rate of the Australian dollar. The statistical test suggests no significant instability in the narrow money demand relationship despite financial deregulation innovation in Australia since the early 1980s.

Foresti and Napolitano (2013) investigated the presence of long run money demand in a selected group of nine developed OECD countries (G7 plus Australia and Switzerland) using quarterly data for the period of 1982 to 2008. They found the role of total wealth in the determination of money demand with positive elasticity. Moreover, a parameter stability analysis suggests that estimated money demand with the inclusion of wealth is more stable.

Nonparametric Approach

Bahmani-Oskooee and Bahmani (2015) did a study in an Iranian context by trying to obtain the failure to find a significant relationship between the demand for money and the exchange rate, which could be due to assuming a linear adjustment mechanism among the variable. In Iran, the researcher introduced nonlinearity in the short run as well as in the long run through a partial sum concept; they obtained that the dollar appreciation and dollar depreciation had an asymmetric impact on the demand for money.

In another study, Lim and Ho (2013) examined the relationship between GDP per capital and exports in ASEAN-5 countries using a nonparametric cointegration test and nonlinear causality by Ajmi et al. (2015). The result from the linear Granger causality gives no significant causality between export and GDP; however, the result in a nonlinear test showed evidence of significant bidirectional causality.

The limited studies on nonparametric approaches in interaction among macroeconomic activities give motivation for this study to explore whether nonparametric approaches will make a difference in results that would help policy makers to select the best intermediate targeting that aims towards sustainable economic growth.

METHODS

The research procedure of this study as shown below:

Unit Root Test

First, we utilized two asymptotically equivalent procedures for detecting unit roots in the data: the Augmented Dickey-Fuller (ADF) and the Phillip and Perron (PP) tests (Phillips and Perron, 1988; Said and Dickey, 1984). If studies' variables are non-stationary at level and integrated

in the same order, we further tested on the existence of a long run relationship using a relative cointegration test.

This paper does not adopt the residual-based test by Engle and Granger (1987) and the VAR-based test by Johansen (1988), and Johensen and Juselius (1990). As noted by Balke and Fomby (1997) as well as Enders and Granger (1998), 'conventional cointegration tests have low power in explaining the cointegrated systems when there is the presence of asymmetric adjustments.'

Threshold Co-integration Test

This empirical study adapts the threshold autoregressive (TAR) model developed by Enders and Granger (1998) and advanced by Enders and Siklos (2001), which was later on extended by Enders and Dibooglu (2001) to the momentum threshold autoregressive (M-TAR) model. The M-TAR model allows us to examine for a long run relationship even with the existence of asymmetric adjustments. The threshold approach can be represented as the following equation:

$$\Delta u_t = p_1 I_t u_{t-1} + p_2 (1 - I_t) u_{t-1}$$
$$= +\sum_{i=1}^{k} n_i \Delta u_{t-1} + w_t \quad (1)$$

where u_t shows as an error term retrieved from the long run equation, which is $\Delta u_t = y_t - [B_0 + B_1 X_{1t} + B_2 X_{2t} \ldots B_n X_n]$; I_t stands for the Heaviside indicator, which relies on the level or changes of

the last period error term, u_{t-1} which is 0 for negative shocks and 1 for positive shocks; k is the optimal lag length, which is determined by Schwarz's information criterion (SIC); and p_n is the speed adjustment for coefficients.

Regarding the Heaviside indicator as the function of u_t, we could specify it through the threshold autoregressive (TAR) model and momentum threshold (M-TAR) model. The TAR model would capture the adjustment of the u_t depending on u_{t-1}, such as:

$$I_t = \begin{cases} 1 \ if \ u_{t-1} \geq \tau \\ 0 \ if \ u_{t-1} < \tau \end{cases} \quad (2)$$

where τ is the value of the threshold, while the M-TAR model is able to capture properties such that the threshold depends on the change of the last period error term, Δu_{t-1}, whether it is increasing or decreasing.

$$I_t = \begin{cases} 1 \ if \ \Delta u_{t-1} \geq \tau \\ 0 \ if \ \Delta u_{t-1} < \tau \end{cases} \quad (3)$$

In general, there are two alternatives to define the value of τ. Firstly, the value could be set as zero, in which case the cointegrating vector coincides with the attractor. Therefore, the adjustment is $p_1 u_{t-1}$ if u_{t-1} is above its long run equilibrium value and $p_2 u_{t-1}$ if u_{t-1} is below its long

run equilibrium value. Moreover, the value could be set as unknown and estimated through the value of p_n. This view tends to disagree with the first alternative, since there are no good reasons to expect the threshold to coincide with the attractor. According to Chan (1993), searching over the potential threshold values minimized the sum of squared errors from the fitted model, which yielded a very consistent estimate of the threshold.

Based on theory, stationarity of u_t will be achieved when $-2 < (p_1, p_2) < 0$. In this study, we examine the stationarity of u_t by putting the null hypothesis, where $H_0 : p_1 = p_2 = 0$ stands as no cointegration. This can be tested by the F-statistics as tabulated in Enders and Siklos (2001).

When there is a cointegration relationship, we could also examine the hypothesis of presenting in the symmetric adjustment, which we set as, $H_0 : p_1 = p_2 = 0$. This hypothesis will be verified through standard F-statistics. If the null hypothesis is rejected, this stands for the existence of an asymmetric adjustment.

Fully Modified Ordinary Least Squares (FM-OLS)

Next, we adapt the Fully Modified OLS (FM-OLS) developed by Phillips and Hansen (1990), and Phillips (1995) in order to estimate the long run coefficients for the cointegrated systems. This estimation relies on the following equation:

$$
\begin{aligned}
Y_t &= \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} \ldots \beta_n X_{nt} \cdot \\
&= \sum_{i=-k}^{+k} \gamma_{1i} \Delta X_{1t-i} + \sum_{i=-k}^{+k} \gamma_{2i} \Delta X_{2t-i} \ldots \\
&= \sum_{i=-k}^{+k} \gamma_{ni} \Delta X_{nt-i} + u_t
\end{aligned}
$$

$$(4)$$

FM-OLS stands out among various estimation approaches with certain characteristics that are appropriate for this empirical study. For example, FM-OLS enables asymptotically eliminating the sample bias for small observation studies. It could solve the sample bias that would occur during our study with annual data as well as having below 50 observations for each studied nation. Moreover, FM-OLS is capable of correcting for endogeneity and serial correlation effects.

Model Specification

We offer the three alternative models that were built on the designed hypothesis. Model specifications below have put in the consideration of Ibrahim and Chancharoenchai (2014)'s study to capture asymmetric cointegration contrary to symmetric hypotheses. Alternative models are listed as follows:

Model 1:

$$\Delta Y_t = \mu + \sum_{i=1}^{k1} \delta_{1i} \Delta Y_{t-i} + \sum_{i=0}^{k2} \gamma_1 X_{1t-i} \dots \sum_{i=0}^{k3} \gamma_{2i} X_{2t-i} \dots \sum_{i=0}^{kn} \gamma_{ni} X_{nt-i} + v_t$$

(5)

Model 2:

$$\Delta Y_t = \mu + \sum_{i=1}^{k1} \delta_{1i} \Delta Y_{t-i} + \sum_{i=0}^{k2} \gamma_1 X_{1t-i} \dots \sum_{i=0}^{k3} \gamma_{2i} X_{2t-i} \dots \sum_{i=0}^{kn} \gamma_{ni} X_{nt-i} + \lambda u_{t-1} + v_t$$

(6)

Model 3:

$$\Delta Y_t = \mu + \sum_{i=1}^{k1} \delta_{1i} \Delta Y_{t-i} + \sum_{i=0}^{k2} \gamma_1 X_{1t-i} \dots \sum_{i=0}^{k3} \gamma_{2i} X_{2t-i} \dots \sum_{i=0}^{kn} \gamma_{ni} X_{nt-i} + \lambda_1 Z_{t-1}^{+} + \lambda_1 Z_{t-1}^{-} + v_t$$

(7)

where Δ is the first different operator, Y is the dependent variable, and X is the independent variable, k_i for $i = 1,\dots,4$ stands as optimal lag orders that are determined by the SIC test, μ is the error term that shows the tendency of the dependent variable from the long run value and other variables, Z_{t-1}^{+} and Z_{t-1}^{-} are error terms that represent above the threshold value and below the threshold value, respectively. Alternatively, they represent positive and negative shock, respectively.

Model 1 will be used for explanations when variables are not cointegrated. It shows that there is only a short-run relationship among the studied variables. We will adopt Models 2 and 3 during the presence of long run cointegration. Model 2 will be put into explanation when studies' variables are symmetrically co-integrated. The u_{t-1} would take into account the past period shocks. For Model 3, it will be adopted in the presence of an asymmetric adjustment in a cointegrated system. In this case, u_{t-1} would divide to Z_{t-1}^{+} and Z_{t-1}^{-} in order to take into account the adjustment from different types of shocks in the market.

Granger Causality

According to Granger (1986, 1988), the hypothesis that the variable, say a, was influenced by b is equivalent to the test that all of the coefficients on the lagged values of b included in the regression are jointly equal to zero. The test statistic used is an F-statistic and rejection of the null hypothesis suggests that the causation runs from a to b. The hypothesis is rejected in both cases; it

suggests that a feedback relationship exists between the two variables. Whenever we are able to prove the existence of a causality relationship, the direction of the causality relationship among variables remains obscured. Upon this, the vector error correction model (VECM) would help us to derive the long run cointegrating vectors and determine the direction of the Granger causality.

However, the VECMs for asymmetric adjustment have not been developed. Therefore, we repeated the causality test for all variables by changing the dependent variables. Finally, we followed the study by Masih and Masih (1996), and determined the exogenous variable (or operating variable) using the rule of no long run relation (no error term or insignificant error term) and no short run impact from other independent variables. The reason is any feedback effect of operating targets with other variables will reduce the intensity of the policy adjustment as if there were no casual effect from other variables to intermediate targets. The endogenous variables would represent the intermediate targets affected by the exogenous variable and committed to the final goal.

EMPIRICAL RESULTS

Data

We focused our study on the ASEAN-5 nations, which consist of Indonesia, Malaysia, the Philippines, Singapore, and Thailand. The data source is the World Bank. This study will cover the annual data

of studied nations from 1960 to 2014 and depend upon data availability. Variables involved would be the real gross domestic product (Y), money supply (M2), exchange rate (ER), consumer price index (CPI), and deposit interest rate (I). None of these variables is the fixed dependent variable since we tend to examine the causality relationship among variables. All variables exclude interest rate in the natural logarithm and first difference in order to get their growth rates. The numerical interest rate believed has a better reflection of economic activity compared to its growth. In applied research, some authors do not log the interest rate (Wongbangpo & Sharma, 2002).

Unit Root Test

We adopt ADF and PP to test the unit root on variables. Both unit root tests cannot reject the null hypothesis of a unit root for the levels of all of the variables, except for the CPI of Thailand (only for the ADF test). In addition, the null hypothesis of a unit root is readily rejected for their first difference at 10% or better in all except the CPI of Singapore, which is not significant. Obviously, the result shows a contradiction between the two tests, which guidance from previous studies suggests (Irz at el., 2013; Harris & Sollis, 2003) conclude a I (1) contradiction among the unit root test since treating a non-stationary variable is severe in statistics. Hence, we conclude that the five variables under investigation are candidates for a cointegration relationship in all of the sample countries.

Asymmetric Co-integration Test

Table 2 and 3 show the ES cointegration test outcomes. From the outcomes, the null of no cointegration cannot be rejected by all cointegration tests for the majority of cases that exclude interest rate, money supply or exchange rate as the independent variable in Malaysia; interest rate or price level as the independent variable in Singapore and real income or interest rate as the independent variable in Thailand. Therefore, Model 1 is suitably used for these cases. Meanwhile, Model 2 seems to be preferred for the interest rate or price level as the independent variable in Singapore; real income or interest rate as the independent variable in Thailand and exchange rate as the independent variable in Malaysia. These cases rejected the null of no cointegration. However, the null of symmetric adjustments cannot be rejected. Finally, the dynamics of a causal chain of macroeconomics when the money supply or interest rate is the dependent variable in Malaysia should be modelled using Model 3, which is the M-TAR asymmetric error-correction model.

Long-run Relations

Table 4 shows the estimated long run coefficients for the cointegrated systems using the FMOLS. First, we discuss the result of Malaysia, in which the money supply function shows a rise of the price level (as the cost of holding money), giving a positive impact to the money supply, while the interest rate generates reserve impact. On the other hand, the interest rate function shows that real income and price level have a positive and significant impact on interest rate, while money supply has a negative impact.

Second, in Singapore's case, the price level function passed the cointegration test; however, no evidence shows that other macroeconomic variables have a relationship with it. Moreover, the interest rate function's result shows a 1% increase in the price level, which will increase the interest rate by 0.12%. Finally, money supply had a positive relationship to real income, while exchange rate had a positive effect on the interest rate for Thailand's cases. This indicates that Thailand is in-line with the Keynesian theory, in which money supply is able to increase national income, but not follow the transmission channel that advocates interest rate and price level increases as well.

According to the IMF (2016), the common central bank mandate of the ASEAN-5 is promoting monetary stability conducive to sustainable economic growth. The long run relationship result helps policy makers identify the long run interaction of macroeconomics activities. This information is useful for policy-makers in designing appropriate monetary policies in order to achieve their central bank mandate. The results show no evidence that the monetary variables of the ASEAN-5 help to control the price level in long-run, however, only Thailand can promote long-run GDP growth through the increase of money supply. The finding on Thailand is in line with the result of Masih and Maish (1996).

Granger-causality Results based Symmetric and Asymmetric ECM

This section discusses the Granger-causation that accounts for the short run dynamic interactions among the five variables. Furthermore, we use these results to find leading or exogenous variables. All of the estimated equations results are reported in Table 5, while simplified results can be referred to in a summary in Table 6.

Importantly, the t-statistics in the ECMs are significant, suggesting the equation is cointegrated. A high value of (α) coefficient means that the given variables adjust faster towards equilibrium. The coefficient of the asymmetric ECM ranges from as high as 0.8 to as low as 0.49. These results suggest that the speed of adjustment back to equilibrium is fairly rapid. However, the coefficient of symmetric ECM ranges in between 0.21 to 0.67; this implies that the speed of adjustment towards equilibrium is moderately rapid.

Furthermore, asymmetric adjustment occurs in Malaysia only. Money supply responds to positive shocks but is insignificant to negative shocks, whereas interest rate made an adjustment to negative shocks only. These imply that without intervention, money supply and interest rate will not adjust towards equilibrium when facing negative shocks and positive shocks. This finding answers the first research question and suggests only the policymakers in Malaysia should take care and make an appropriate intervention for asymmetric adjustment.

In general, the only unidirectional causal relationship was found among the selected macroeconomic variable for the ASEAN 5. Test results confirm that economic growth and exchange rate growth cause interest rate growth, and inflation causes exchange rate growth for Indonesia. In Malaysia, we found only one causal relationship in which economic growth causes interest rates and inflation to grow. Next, with regard to the Philippines' cases, money supply growth has the most powerful causal effect, which causes all other variables. Second, exchange rate growth causes everything, excluding money supply growth. Additionally, economic growth causes interest rates.

For Singapore, the most powerful causal effect was from money supply growth as well, which causes all other variables to exclude interest rates. The second is the inflation rate, which causes economic growth and exchange rate growth. Then, exchange rate growth causes economic growth, while economic growth causes interest rates. Finally, we discuss the dynamic causal chain of Thailand, in which the result shows that money supply growth is highly dependent on other macroeconomic variables excluding exchange rate.

The findings of this paper contradict the study of Masih and Maish (1996), which found the leading variable of Thailand and Malaysia is money supply. On the other hand, our result shows the leading variables of Indonesia closely coincide with Masih and AbdulKarim (2014), who studied the casual chain of Nigeria. Two of the three leading variables are the same, Y and CPI.

The different findings of leading variables may due to the asymmetric model that was adopted by this study. The asymmetric result should be more accurate since the evidence of Katrakilidis and Trachanas (2012) suggests that ignoring the intrinsic nonlinearities may lead to misleading inferences.

Furthermore, the empirical finding of this study helps to answer the second research question by finding out the leading variable (no impact from other macroeconomic variables, no matter whether in the long run or short run) for each country. Excluding real income (as a monetary goal), all leading variables can be considered as an operating target in monetary policy while those relevant endogenous variables (influenced by the leading variable) should have considered an intermediate target. First, monetary aggregate operating targeting is the most common monetary policy that can be implemented by the ASEAN 5, excluding Thailand and Malaysia. Second, exchange rate operating targeting can be adopted in two countries, Malaysia and Thailand. Finally, Singapore and the Philippines found one leading variable only, money supply, whereas other countries had two options to setup their operating target.

In summary, Singapore and the Philippines should apply the money supply as their operating target, because the money supply of these two countries impacts other variables without being influenced by other macroeconomic variables. Moreover, Indonesia and Thailand have two options for operating targets. The operating target options are inflation and money supply for Indonesia, and inflation and exchange rate for Thailand. For both nations, we suggest that inflation applies to the operating target since it has the casual effect on exchange rate of Indonesia and money supply of Thailand. Meanwhile, the inflation of Indonesia and exchange rate of Thailand has no causal effect on other variables. Finally, the wisest operating target of Malaysia is the exchange rate.

The report of the IMF (2016) shows inflation is the current intermediate target for the ASEAN-5 excluding Singapore, targeting the exchange rate. The Philippines and Singapore can maintain their current intermediate target based on the suggested operating target. However, Indonesia and Thailand should set exchange rate and money supply as their intermediate targets, respectively. A stable exchange rate is a pivotal accelerator for Indonesia, which is a small open economy, while the persistent and slow increase of the money supply is proven to promote sustainable economic growth in Thailand. Unfortunately, we cannot suggest intermediate targets since there is no casual effect of exchange rates in Malaysia to other variables. Malaysia can keep the original intermediate target but needs to consider monetary instruments beyond this study.

CONCLUSION

The present paper assesses the symmetric and asymmetric dynamic interaction of macroeconomic activities for the ASEAN 5. Various interesting results emerged from the present analysis. First, we found that no long run relationship was evident for Indonesia and the Philippines. Second, among the three countries that passed the cointegration test, Malaysia was the only country found to have an asymmetric adjustment on the different shock. Additionally, the money supply of Malaysia responds only to positive shocks (good news), while the interest rate of Malaysia responds only to negative shocks (bad news). This finding shows that adjustment towards equilibrium for macroeconomic variables is imperfect, and policy makers in Malaysia should intervene in the money supply when there is a positive shock and intervene in interest rates when there is a negative shock.

According to the long-run coefficients and Ganger causality results, we found two leading variables for the Philippines and Singapore and suggest money supply should be set as an operating target. The reason is the money supply of these two countries has a strong impact on other macroeconomic variables compared to another leading variable; therefore, the best operating target is money aggregate targeting. Malaysia found only one leading variable, which is exchange rate; thus, exchange rate targeting is the most appropriate policy target. Finally, Indonesia and Thailand found two leading variables, which were based on the impact from the leading variables to other macroeconomic variables, suggesting that inflation targeting is the best for these two countries. This is because the alternative leading variable of these countries has no impact on other macroeconomic variables.

Based on the sensitiveness to the leading variable, we suggest Malaysia, the Philippines and Singapore can maintain their current intermediate target; however, policymakers in Malaysia need to find a policy instrument beyond the discussion of this paper. On the other hand, Indonesia and Thailand should change their intermediate targets to exchange rate and money supply, respectively. As a small open economy, Indonesia demands a stable exchange rate. The findings of Masih and Maish (1996) and our empirical result proved that Thailand is able to promote its economy through the money supply; therefore, inflation as the operating target and money supply as the intermediate is an optimal combination for Thailand's monetary policy.

REFERENCES

Adusei, M., & Gyapong, E. Y. (2017). The impact of macroeconomic variables on exchange rate volatility in Ghana: The Partial Least Squares Structural Equation Modelling approach. *Research in International Business and Finance*, 42, 1428-1444.

Ajmi, A. N., Aye, G. C., Balcilar, M., & Gupta, R. (2015). Causality between exports and economic growth in South Africa: Evidence from linear and nonlinear tests. *The Journal of Developing Areas*, *49*(2), 163-181.

Bahmani-Oskooee, M., & Bahmani, S. (2015). Nonlinear ARDL approach and the demand for money in Iran. *Economics Bulletin*, *35*(1), 381-391.

Balke, N. S., & Fomby, T. B. (1997). Threshold cointegration. *International Economic Review*, *38*(3), 627-645.

Chan, K. S. (1993). Consistency and limiting distribution of the least squares estimator of a threshold autoregressive model. *The Annals of Statistics*, *21*(1), 520-533.

Chen, N. F., Roll, R., & Ross, S. A. (1986). Economic forces and the stock market. *Journal of business*, *59*(3), 383-403.

Cioran, Z. (2014). Monetary policy, inflation and the causal relation between the inflation rate and some of the macroeconomic variables. *Procedia Economics and Finance*, 16, 391-401.

Dhakal, D., Kandil, M., & Sharma, S. C. (1993). Causality between the money supply and share prices: A VAR investigation. *Quarterly Journal of Business and Economics*, *32*(3), 52-74.

Enders, W., & Granger, C. W. J. (1998). Unit-root tests and asymmetric adjustment with an example using the term structure of interest rates. *Journal of Business & Economic Statistics*, *16*(3), 304-311.

Enders, W., & Siklos, P. L. (2001). Cointegration and threshold adjustment. *Journal of Business & Economic Statistics*, *19*(2), 166-176.

Enders, W., & Dibooglu, S. (2001). Long-run purchasing power parity with asymmetric adjustment. *Southern Economic Journal*, *68*(2), 433-445.

Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: Representation, estimation, and testing. *Econometrica. Journal of the Econometric Society*, *55*(2), 251-276.

Falk, B. (1986). Further evidence on the asymmetric behavior of economic time series over the business cycle. *Journal of Political Economy*, *94*(5), 1096-1109.

Foresti, P., & Napolitano, O. (2013). Modelling long-run money demand: A panel data analysis on nine developed economies. *Applied Financial Economics*, *23*(22), 1707-1719.

Friedman, M. (1995). The role of monetary policy. *In Estrin, S., & Marin, A., Essential Readings in Economics* (pp. 215-231). London, England: Palgrave, London.

Granger, C. W. (1986). Developments in the study of cointegrated economic variables. *Oxford Bulletin of Economics and Statistics*, *48*(3), 213-228.

Granger, C. W. (1988). Some recent development in a concept of causality. *Journal of Econometrics*, *39*(1-2), 199-211.

Handa, J. (2009). *Monetary Economics*, New York, United States: Routledge.

Harris, R., & Sollis, R. (2003). *Applied time series modelling and forecasting.* New York, United States: Wiley.

Hossain, A. A. (2012). Modelling of narrow money demand in Australia: An ARDL cointegration approach, 1970–2009. *Empirical Economics*, *42*(3), 767-790.

Hylleberg, S., Engle, R. F., Granger, C. W. J., & Yoo, B. S. (1990). Seasonal integration and cointegration. *Journal of Econometrics*, *44*(1-2), 215-238.

Ibrahim, M. H., & Chancharoenchai, K. (2014). How inflationary are oil price hikes? A disaggregated look at Thailand using symmetric and asymmetric cointegration models. *Journal of the Asia Pacific Economy*, *19*(3), 409-422.

Asean-5 cluster report: Evolution of monetary policy frameworks (IMF Country Report No.16/176). Washington DC: International Monetary Fund.

Irz, X., Niemi, J., & Liu, X. (2013). Determinants of food price inflation in Finland—The role of energy. *Energy Policy*, 63, 656-663.

Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of Economic Dynamics and Control*, 12(2-3), 231-254.

Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration—with applications to the demand for money. *Oxford Bulletin of Economics and Statistics*, *52*(2), 169-210.

Lim, S. Y., & Ho, C. M. (2013). Nonlinearity in ASEAN-5 export-led growth model: Empirical evidence from nonparametric approach. *Economic Modelling*, *32*(1), 136-145.

Klyuev, M. V., & Dao, T. N. (2016). *Evolution of Exchange Rate Behavior in the ASEAN-5 Countries* (IMF Working Paper No.16/165). Washington DC: International Monetary Fund.

Katrakilidis, C., & Trachanas, E. (2012). What drives housing price dynamics in Greece: New evidence from asymmetric ARDL cointegration. *Economic Modelling*, 29(4), 1064-1069.

Kotlowski, J. (2005). *Money and Prices in the Polish Economy: Seasonal Cointegration Approach* (Warsaw School of Economics Working Paper No.3-05). Warsaw: Warsaw School of Economics.

Masih, A. M., & Masih, R. (1996). Empirical tests to discern the dynamic causal chain in macroeconomic activity: New evidence from Thailand and Malaysia based on a multivariate cointegration/vector error-correction modeling approach. *Journal of Policy Modeling*, *18*(5), 531-560.

Masih, R., & Masih, A. M. (1996). Macroeconomic activity dynamics and Granger causality: New evidence from a small developing economy based on a vector error-correction modelling analysis. *Economic Modelling*, *13*(3), 407-426.

Masih, M., & AbdulKarim, F. (2014). *Dynamic causal chain of money, output, interest rate, exchange rate and prices: Nigeria as a case study* (MPRA paper 58240). Munich: Munich Personal RePEc Archive.

McCallum, B. T. (1999). Issues in the design of monetary policy rules. *Handbook of Macroeconomics*, *1*, 1483-1530. New York, United States: Elsevier.

Mishkin, F. S., & Savastano, M. A. (2001). Monetary policy strategies for Latin Elsevier America. *Journal of Development Economics*, *66*(2), 415-444.

Mukherjee, T. K., & Naka, A. (1995). Dynamic relations between macroeconomic variables and the Japanese stock market: An application of a vector error correction model. *Journal of Financial Research*, *18*(2), 223-237.

Neftci, S. N. (1984). Are economic time series asymmetric over the business cycle? *Journal of Political Economy*, *92*(2), 307-328.

Phillips, P. C. (1995). Fully Modified Least Squares and Vector Auto-regression. *Econometrica. Journal of the Econometric Society*, 63(5), 1023-1078.

Phillips, P. C., & Hansen, B. E. (1990). Statistical inference in instrumental variables regression with I (1) processes. *The Review of Economic Studies*, *57*(1), 99-125.

Phillips, P. C., & Perron, P. (1988). Testing for a unit root in time series regression. *Biometrika*, *75*(2), 335-346.

Poole, W. (1970). Optimal choice of monetary policy instruments in a simple stochastic macro model. *The Quarterly Journal of Economics*, *84*(2), 197-216.

Said, S. E., & Dickey, D. A. (1984). Testing for unit roots in autoregressive-moving average models of unknown order. *Biometrika*, *71*(3), 599-607.

Tan, H. B., & Baharumshah, A. Z. (1999). Dynamic causal chain of money, output, interest rate and prices in Malaysia: Evidence based on vector error-correction modelling analysis. *International Economic Journal*, *13*(1), 103-120.

Wongbangpo, P., & Sharma, S. C. (2002). Stock market and macroeconomic fundamental dynamic interactions: ASEAN-5 countries. *Journal of Asian Economics*, *13*(1), 27-51.

Experiences of Interpersonal Relationships in Patients with Obsessive-Compulsive Disorder: A Qualitative Study in Iran

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ABSTRACT

Obsessive-compulsive disorder (OCD) is a common mental illness characterized by obsessions and/or compulsions. OCD is a chronic and debilitating mental illness that has a negative effect on the lives of those affected by this disorder. A person who has been diagnosed with OCD suffers from persistent obsessions and/or compulsions that interfere with all aspects of life such as their personal relationships, jobs, and everyday lives. It affects each person differently, with one of the most common issues being difficulty in maintaining relationships. This study used a qualitative method via semi-structured interviews followed by thematic analysis. Patients' experiences in encountering problems caused by OCD were then identified, such as turbulent interpersonal relationships with relatives and difficulty communicating. The study used purposive sampling and had a sample of twenty-four patients with OCD. The patients were recruited from the Farshchian Hospital's psychiatry department in Hamadan, Iran from May to October 2017. The sampling was continued until the authors reached data saturation in which no new information was obtainable from the patients. The analysis identified four major themes: (1) communication problems in family relationships; (2) dysfunctional spousal relationships; (3) relationship problems with friends and community; and (4) communication problems within their work environment. The participants viewed OCD as a disorder that unfavourably affected their family and personal relationships, education, and occupations. When patients experience negative responses from family and friends in their attempts to communicate, their

health is threatened. The patients become at risk for failure in therapeutic treatment, with the possibility of increased severity or recurrence of OCD symptoms.

Keywords: Interpersonal relations, Iran, Obsessive compulsive disorders, qualitative research

INTRODUCTION

Obsessive-compulsive disorder (OCD) is a common mental illness characterized by obsessions and/or compulsions (Sadock et al., 2014). Obsessions are unwanted, intrusive, and recurring thoughts. Patients attempt to relieve the distress caused by obsessions by repeated behaviours (e.g., organising, hand washing, checking) and/or repetitive mental acts (e.g., repeating words silently, praying, counting) to reduce or prevent anxiety and compulsions (American Psychiatric Association, 2013). OCD is a chronic and debilitating mental illness that negatively affects the lives of those affected by it (Abramowitz, Taylor, & Mckay, 2009; Piacentini, Bergman, Keller, & Mccracken, 2003). It is estimated that prevalence of OCD in the population worldwide is 1–3% (Hirschtritt et al., 2017). OCD is diagnosed when a person suffers from persistent obsessions and/or compulsions that interfere with all aspects of life, such as personal relationships, their job, and everyday activities (Knapton, 2016). Literature review revealed OCD patients had significantly poor quality of life compared to the general population (Subramaniam, Soh, Vaingankar, Picco, & Chong, 2013; Van Grootheest, Cath, Beekman, & Boomsma, 2005). Quality of life is a multi-dimensional conception that provides an optimal level of sense of well-being in terms of psychological, physical, cognitive, and social functions (Yazdi-Ravandi et al., 2013). In these patients, quality of life is strongly associated with the degree of functional impairment (Huppert, Simpson, Nissenson, Liebowitz, & Foa, 2009). Quality of life is also impacted by the severity of OCD symptoms (Eisen et al., 2006; Rapaport, Clary, Fayyad, & Endicott, 2005; Rodriguez-Salgado et al., 2006). Patients with OCD may be embarrassed by the disorder and may fear hospitalisation or criminalisation if they explain their symptoms (Torres et al., 2007). People with OCD are likely to hide their symptoms rather than confront their fears and discuss it with others. This lack of communication can cause severe problems in their everyday lives, particularly their relationships with those around them (Robinson, Rose, & Salkovskis, 2017; Salkovskis, 1990).

OCD patients are often indecisive because of their recurring thoughts and therefore need more time to make decisions. Most of them become so stuck on the rules, regulations, and details that they forget their original goal. They persist in their thoughts and do not want to change their mind. Those with OCD find it difficult to cooperate with others and do not like to delegate tasks (American Psychiatric Association, 2013; Keyes, Nolte, & Williams, 2017). They usually have many requests for friends and family and become irritated when their requests are not met, resulting in stressed relationships (Montazeri, Neshatdoost,

Abedi, & Abedi, 2014; Pedley, Bee, Berry, & Wearden, 2017). These patients struggle with intimate relationships, emotional expression, emotional variety, and the appreciation of others, all of which affects others' satisfaction in interpersonal relationships (Mokhtari, Bahrami, Padash, Hosseinian, & Soltanizadeh, 2012).

OCD influences patients' daily lives. It causes many problems in different aspects of everyday life. Struggling with interpersonal relationships with family and community is the most common issue caused by this disorder. Each person is uniquely affected by it. It is imperative to study the experiences of patients with OCD and how it affects their relationships to better understand the disorder. Firstly, the majority of the previous quantitative studies have not focused on all aspects of the patients' problems. This creates knowledge gaps regarding problems in interpersonal relationships, so there is an essential need to gather further information around this issue. Secondly, many of the studies referenced were conducted in developed countries. There is a need for a qualitative study that investigates patients' experiences with OCD and how it affects their relationships in developing countries, such as Iran, because of its different culture and customs.

MATERIALS AND METHODS

The study used a qualitative method via semi-structured interviews followed by thematic analysis to identify the experiences of OCD patients, with a focus on the consequences of living with OCD.

Participants and Setting

Twenty-four patients with OCD were selected via purposive sampling. The patients were recruited from the Farshchian Hospital's psychiatry department in Hamadan, Iran from May to October 2017. The patients were selected based on the following inclusion criteria: patients must have an OCD diagnosis via a psychiatrist based on the Structured Clinical Interview for DSM-IV Clinical Version (Persian edition); patients must be between 18 and 60 years of age; patients must have a score of ≥16 on the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS); and patients must be Persian speakers. Patients were excluded if they had psychosis, alcohol or drug abuse, intellectual disability, any neurologic disease, or a considerable medical illness and chose to withdraw from the research. The selected patients were almost homogeneous in terms of symptoms severity, illness duration, marital and educational status. The sampling was continued until the authors reached data saturation in which no new information was obtainable.

Ethical Considerations

All the patients were given information about the purpose of the study. They were aware that taking part in this study was voluntary and that they had the right to refuse participation or withdraw from the research at any stage without any personal explanation or consequences. The patients were reassured that their personal information and identities would remain

confidential and would not be revealed in study reports. Finally, patients signed a written consent form if they accepted to take part in the current research. The study was reviewed and approved by Hamadan University of Medical Sciences Ethics Committee.

Data Collection

The main method of data collection was semi-structured face to face interviews. Using this method, the participants freely shared their experiences of living with obsessive compulsive disorder. The interviews were carried out by a trained psychologist in a quiet room and took approximately 60 and 70 minutes to complete based on the participants' responses. The interviews were recorded with patient permission and were immediately transcribed verbatim. The interview began with a general and open question about the experiences and thoughts of the patient about their life with obsessive-compulsive disorder. After the initial open question, these follow up questions were asked:

- What have been the effects of OCD on your personal life?
- What have been the effects of OCD on your family communication?
- What have been the effects of OCD on your social communication?
- Finally, do you have anything else to add about your other problems?

If the patient's account became less relevant to the questions, the researcher would ask questions about their statements to draw the participant's attention back to the topic. The researcher asked questions such as "Can you explain more about this?", "Can you make this clearer?", "What do you mean exactly?", and "Can you provide an example?" to bring the patient back on topic. Therefore, the interview process continued while exploring participants' experiences.

Data Analysis

Thematic analysis was used to interpret the data. It is the most common and widely used method for analysing qualitative data. Data collection and data analysis happened simultaneously. Credibility, dependability, conformability, and transferability were used as accuracy and precision criteria. The transcripts were verified and matched with the audio-tapes. All patients were given copies of their transcripts. It should be noted that participants had the option to change their transcripts if they felt that it did not reflect their experiences.

A primary coding frame was made from issues apparent in the known literature and from careful reading and re-reading of the final transcripts. The line by line coding approach was applied. All descriptions were individually coded and corrected by three specialists to determine inconsistencies in coding. Clear descriptions of the selection, context, the characteristics of the participants, the process of data collection, and analysis contributed to the conformability and transferability of the results.

RESULTS

A total of 24 OCD patients (16 females and 8 males) were included in the current study. The subjects were aged between 20 and 51 years (Mean±SD age 35.45±10.48). In terms of marital status, 15 were married, six were single, and three were divorced. 13 of the participants had a high school diploma, seven patients had undergraduate degrees and three had an academic degree.

Themes

The analysis identified four major themes: (1) communication problems in family relationships; (2) dysfunctional spousal relationships; (3) relationship problems with friends and community; and (4) communication problems within their work environment. All of the participants expressed that OCD is a disorder that unfavourably affects their family and personal relationships, education, occupations.

Problems in Familial Relationships.

Familial relationships emerged as a major theme amongst the problems expressed by OCD patients. Problems created by OCD can include excessive family conflict, ineffective problem solving, a lack of intimacy, and weak emotional bonds.

I constantly have issues with my in-laws – my mother and sister in-law in particular. I feel they try to control me too much and interfere in my life. My mind is always occupied with them. Therefore, I do not have a good relationship with either of them. (Participant 1)

When I am feeling bad, I do not like to be in crowded places. Obsessive thoughts create cold interactions with my family, and family relationships are not important to me. My behaviour upsets them. They are losing their relationship with me because they think I'm so comfortable in a poor relationship. (Patient 6)

Obsessive thoughts have caused me to be sensitive and detailed in my familial relationships. I feel there is a hidden meaning behind every behaviour. I have become sensitive to anything. My child makes a mistake and I am constantly on their case. I do not abuse them, of course, but others tell me that I am too critical. (Participant 8)

I always bother everyone for cleanliness and that upsets my mother. She says, "why are you this way?" I always complain that they [my family] are dirty and do not do their chores properly. I usually get into fights with my mother. I know I have become too sensitive and this has damaged my relationship with my family, but it is out of my control. (Participant 11)

Marital Miscommunication.

The limitations caused by OCD can lead to a cold and distant relationship between married couples. The stressed relationship creates a decline in the quality and satisfaction

of couples, especially if their spouse has a lot of social contacts and are interested in socializing and communicating with others. All married participants reported that they were concerned about marital miscommunication.

> I am always on my husband's case regarding different but unimportant things and he tells me that, "you are too sensitive and fussy about what I do". He is right, the poor thing. I know most of what he says is right. (Participant 1)

> I hate washing, but I got to do it. I have no choice. My relationship with my husband has become cold because of my OCD. I constantly complain that he is dirty and makes the house dirty and najis [it refers to things that are deemed as ritually unclean in Islam such as dogs]. For example, I tell him that because there are dogs in the street and or the ground is muddy then he or the car have gotten dirty [najis] while in the street so he cannot come into the house. (Participant 5)

> My husband's behaviour has changed toward me automatically. He complains a lot because of my disorder and gives me the cold shoulder. I ask him to talk to me, but he refuses. We fight quite often and due to this reason, I do not go out with him often. I prefer to go alone. My relationship with my husband used to be good but he tends to tease me, gets on my case, and frustrates me these days. (Participant 14)

> My children support me within the family, but my husband does not care about me at all. My husband tells me that everything is clean and I should not be this obsessed with cleanliness. He beats me when he gets angry. He was like that since the beginning [in his youth], even when I was pregnant. (Participant 16)

Communication Difficulty with Friends and Society. OCD commonly impairs friendships and daily social activities. Patients have poor relationships and restricting visits with relatives, friends, and society which can reinforce stigmas and create social isolation. Patients often attempt to hide their OCD because of the harsh judgement of others.

> I would like to have better relations with my friends. In the past, I used to annoy them a bit by repeating something too many times because of my OCD. I did not want to be around other people but now I have gotten better and try to behave myself. (Participant 4)

> I interacted with the neighbours from my previous neighbourhood because they were clean and had OCD just like me, but my new neighbours are not really clean or religious, so I do not interact with them. I have no relationship with them. (Participant 5)

> I do not hang out with my friends that much. I am not bold enough to go see them. This disorder [OCD] is

embarrassing to me and whenever I go to my friends, I am unable to interact with them, so I do not bother seeing them anymore. (Participant 7)

The disorder has left a negative impact on my relationships and friendships. My relationships with immediate friends and family have suffered. I cannot interact with others properly because of my mental preoccupations/obsessions. (Participant 10)

Miscommunication in the Work Environment. OCD affects people's relationships and daily life each year, but it can become very problematic to manage in the work environment as well. In the work force, it is hard for those with OCD to take care of certain tasks, because they may be excessively concerned with preciseness, order, and neatness, which in turn influences their efficiency. Employees with OCD may spend too much time idling in obsessive loops which can result in stress and anxiety. It is difficult for them to concentrate effectively and focus on their tasks. People with OCD may experience germaphobia, repetitive motions, the need to arrange objects in specific order, social isolation, ritualistic behaviour, or persistent repetition of actions or words. These preoccupations can influence their efficiency in the workplace, or they can even get accustomed to their benefit. It can lead to miscommunication between supervisors, co-workers, and employees.

I would face small problems with my colleagues at my previous job. I was a bus driver and I was obsessed with the fact that bus speed exceeds a certain level. My mind was occupied by this problem. Because of this, my boss thought I was being stubborn and he hated that. (Participant 3)

I am a farmer and I constantly have issues with fellow villagers who also own lands. I do not have a good relationship with them. We even get into fights sometimes because I think they want to take advantage of me. I do not greet them when I bump into them in the street. I have this kind of problem with a lot of them. (Participant 4)

I fight with my brothers at my workplace because of my sensitivity. I think they do not listen to me. I am very careful about the cost and earnings of our shop, but the others are not like that. I would go far in my profession if I did not have OCD and I wish I did not. For example, it would be better for me to not be suspicious rather than arguing with customers and being mean. (Participant 15)

I think my OCD has caused some problems in my profession [teaching] regarding testing students. I am very strict and I have been told so. I do not have any problems with my colleagues, but I think my strictness upsets the students. (Participant 24)

DISCUSSION

This study provides valuable insight into how some patients with OCD conceptualise experiences about their communication. The results of this study are from a small, purposeful sampled group, and therefore generalisation is difficult. The samples are not representative of all patients with OCD. Each participant was chosen through a psychiatric clinic in a hospital in Hamadan, west of Iran.

It is important to develop patient and clinician awareness of how and why OCD can impact their relationships and everyday lives to better promote and understand mental health. In this study, familial and spousal communication problems were the main issue impacting the patients' quality of life. OCD patients show more problems in familial relationships, social relationships, their ability to take vacations, and societal roles than those without. One study reported that 23.1 % of all participants with OCD experienced severe troubles in family relationships as the primary problem caused by their OCD (Subramaniam et al., 2013).

The three most common problems expressed by couples in family therapy are emotional detachment, power fights, and absence of intimacy (Walseth, Haaland, Launes, Himle, & Haland, 2017). The current study demonstrates that OCD may enhance or contribute to couples' relationship problems. Participants expressed that OCD unpleasantly affected their family and individual relationships, education, and jobs. They experienced a sense of inordinate failure in personal life.

They had expectations of a normal and usual life, but their goals were postponed or disturbed because of OCD. This may be a primary factor in the communication problems in patient with OCD.

Family members of patients with OCD often experience substantial distress when observing the patient feeling anxious and performing seemingly senseless actions, such as repetitive cleaning or checking. Expert OCD psychotherapists are well versed about how the patients' behaviour can result in malformed interpersonal activity in the family (Walseth et al., 2017). Based on clinical imitations, the OCD study field has paid more attention to family and interpersonal relationships in patients with OCD. All family members, adults, and children can provide accommodations to OCD symptoms (Lebowitz, Panza, Su, & Bloch, 2012).

Studies in England (Coughtrey, Shafran, Lee, & Rachman 2012; Murphy & PereraDelcourt, 2014), Singapore (Subramaniam et al., 2013), Norway (Walseth et al., 2017), USA (Eisen et al., 2006), and Iran (Saei, Sepehrmanesh, & Ahmadvand, 2017) all found that interpersonal and familial relationship are very important to OCD patient's life. The findings of the current study are consistent with those of Knapton (2016). They reported that a common concern in patients with OCD is a disturbance in interpersonal relationships. These findings also support the studies of Williams, Powerson, and Foa (2012), Jahangard et al. (2018), and Lebowitz et al. (2012).

CONCLUSION

Patients with OCD experienced problems in their familial relationships, marital miscommunication, difficulty communicating with friends and society, and miscommunication in the work environment. When patients experience negative responses from family and friends in their attempts to communicate, their health is threatened. The patients become at risk for failure in therapeutic treatment, with the possibility of increased severity or recurrence of OCD symptoms.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest

REFERENCES

Abramowitz, J. S., Taylor, S. & Mckay, D. (2009). Obsessive-compulsive disorder. *The Lancet, 374*(9688)**,** 491-499. doi: 10.1016/S0140-6736(09)60240-3

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders (DSM-5®).* Arlington, USA: American Psychiatric Pub.

Coughtrey, A. E., Shafran, R., Lee, M. & Rachman, S. J. (2012). It's the feeling inside my head: a qualitative analysis of mental contamination in obsessive-compulsive disorder. *Behavioural and Cognitive Psychotherapy, 40*(2), 163-173. doi: 10.1017/S1352465811000658

Eisen, J. L., Mancebo, M. A., Pinto, A., Coles, M. E., Pagano, M. E., Stout, R. & Rasmussen, S. A. (2006). Impact of obsessive-compulsive disorder on quality of life. *Comprehensive Psychiatry, 47*(4)**,** 270-275. doi: 10.1016/j.comppsych.2005.11.006

Hirschtritt, M. E., Bloch, M. H., & Mathews, C. A. (2017). Obsessive-compulsive disorder: advances in diagnosis and treatment. *Jama*, 317(13), 1358-1367. doi:10.1001/jama.2017.2200

Huppert, J. D., Simpson, H. B., Nissenson, K. J., Liebowitz, M. R., & Foa, E. B. (2009). Quality of life and functional impairment in obsessive–compulsive disorder: a comparison of patients with and without comorbidity, patients in remission, and healthy controls. *Depression and Anxiety, 26*(1), 39-45. doi: 10.1002/da.20506

Jahangard, L., Fadaei, V., Sajadi, A., Haghighi, M., Ahmadpanah, M., Matinnia, N., … & Holsboer-Trachsler, E. (2018). Patients with OCD report lower quality of life after controlling for expert-rated symptoms of depression and anxiety. *Psychiatry Research, 260***,** 318-323. doi: 10.1016/j.psychres.2017.11.080

Keyes, C., Nolte, L. & Williams, T. I. (2017). The battle of living with obsessive compulsive disorder: a qualitative study of young people's experiences. *Child and Adolescent Mental Health***,** vol, 1-7. doi: 10.1111/camh.12216

Knapton, O. (2016). Experiences of obsessive-compulsive disorder: Activity, state and object episodes. *Qualitative Health Research, 26*(14)**,** 2009-2023. doi: 10.1177/1049732315601666

Lebowitz, E. R., Panza, K. E., Su, J., & Bloch, M. H. (2012). Family accommodation in obsessive–compulsive disorder. *Expert Review of Neurotherapeutics, 12*(2)**,** 229-238. doi: 10.1586/ern.11.200

Mokhtari, S., Bahrami, F., Padash, Z., Hosseinian, S., & Soltanizadeh, M. (2012). The effect of schema therapy on marital satisfaction of couples with obsessive-compulsive personality disorder (OCPD). *Interdisciplinary Journal of Contemporary Research in Business, 3*(12), 207.

Murphy, H., & PereraDelcourt, R. (2014). 'Learning to live with OCD is a little mantra I often repeat': Understanding the lived experience of obsessive-compulsive disorder (OCD) in the contemporary therapeutic context. *Psychology and Psychotherapy: Theory, Research and Practice, 87*(1)**,** 111-125. doi: 10.1111/j.2044-8341.2012.02076.x

Montazeri, M. S., Neshatdoost, H., Abedi, M. R., & Abedi, A. (2014). Effectiveness of schema therapy on symptoms intensity reduction and anxiety in a special case with obsessive compulsive personality disorder. *Zahedan Journal of Research in Medical Sciences, 16*(5)**,** 92-94.

Pedley, R., Bee, P., Berry, K., & Wearden, A. (2017). Separating obsessive-compulsive disorder from the self. A qualitative study of family member perceptions. *BMC Psychiatry, 17*(1), 326. doi: 10.1186/s12888-017-1470-4

Piacentini, J., Bergman, R. L., Keller, M. & Mccracken, J. (2003). Functional impairment in children and adolescents with obsessive-compulsive disorder. *Journal of child and Adolescent Psychopharmacology, 13*(Supl 2-1)**,** 61-69. doi: 10.1089/104454603322126359

Rapaport, M. H., Clary, C., Fayyad, R. & Endicott, J. (2005). Quality-of-life impairment in depressive and anxiety disorders. *American Journal of Psychiatry, 162*(6)**,** 1171-1178. doi: 10.1176/appi.ajp.162.6.1171

Robinson, K. J., Rose, D. & Salkovskis, P. M. (2017). Seeking help for obsessive compulsive disorder (OCD): a qualitative study of the enablers and barriers conducted by a researcher with

personal experience of OCD. *Psychology and Psychotherapy: Theory, Research and Practice, 90*(2), 193-211 . doi: 10.1111/papt.12090

Rodriguez-Salgado, B., Dolengevich-Segal, H., Arrojo-Romero, M., Castelli-Candia, P., Navio-Acosta, M., Perez-Rodriguez, M. M., Saiz-Ruiz, J., & Baca-Garcia, E. (2006). Perceived quality of life in obsessive-compulsive disorder: related factors. *BMC psychiatry, 6*(1)**,** 20. doi: 10.1186/1471-244X-6-20

Sadock, B. J., & Sadock, V. A. (2014). *Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry*. Philadelphia: Lippincott Williams & Wilkins.

Saei, R., Sepehrmanesh, Z., & Ahmadvand, A. (2017). Perceived emotions in patients with obsessive-compulsive disorder: Qualitative study. *Journal of Fundamentals of Mental Health, 19*(2)**,** 84-89. doi: 10.22038/JFMH.2017.8342

Salkovskis, P. M. (1990). Obsessions, compulsions and intrusive cognitions. In Peck D. F. & Shapiro C. M. (Eds.), *Measuring Human Problems: A practical guide* (pp. 91-118). Oxford, England: Wiley.

Subramaniam, M., Soh, P., Vaingankar, J. A., Picco, L., & Chong, S. A. (2013). Quality of life in obsessive-compulsive disorder: impact of the disorder and of treatment. *CNS drugs, 27*(5)**,** 367-383. doi: 10.1007/s40263-013-0056-z

Torres, A. R., Prince, M. J., Bebbington, P. E., Bhugra, D. K., Brugha, T. S., Farrell, M., Jenkins, R., … & Singleton, N. (2007). Treatment seeking by individuals with obsessive-compulsive disorder from the British Psychiatric Morbidity Survey of 2000. *Psychiatric Services, 58*(7)**,** 977-982.

Van Grootheest, D. S., Cath, D. C., Beekman, A. T. & Boomsma, D. I. (2005). Twin studies on obsessive–compulsive disorder: a review. *Twin Research and Human Genetics, 8*(5), 450-458. https://doi.org/10.1375/twin.8.5.450

Walseth, L. T., Haaland, V. Ø., Launes, G., Himle, J. & Haland, A. T. 2017. Obsessive-Compulsive Disorder's Impact on Partner Relationships: A Qualitative Study. *Journal of Family Psychotherapy, 28*(3)**,** 205-221. doi: 10.1080/08975353.2017.1291239

Williams, M., Powerson B. M., & Foa, B. F. (2012). *Obsessive-compulsive Disorder. Handbook of Evidence-based Practice in Clinical Psychology.* New Jersey, USA: John Wiley & Sons, Inc. doi: 10.1002/9781118156391.ebcp002013

Yazdi-Ravandi, S., Taslimi, Z., Saberi, H., Shams, J., Osanlo, Sh., Nori, G. & Haghparast, A. (2013). The role of resilience and age on quality of life in patients with pain disorders. *Basic . and clinical neuroscience, 4*(1), 24-30. PMID: 25337324

SOCIAL SCIENCES & HUMANITIES

Indirect Artworks Related to the Separation Wall in Occupied Palestine: Analytical Study

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ABSTRACT

The Israeli occupation in Palestine led to a huge wall being built to separate the West Bank from other Palestinian territories, causing devastating consequences on the life of Palestinians in all aspects. As a means of resistance against the occupation and the destruction of the wall, Palestinian artists depict various images of different genre of art on the wall. Several foreign artists also participate in the demonstration to show their solidarity with the Palestinians and to display the Palestinians' sufferings to the world. These works of art are called 'direct artwork'. Many Palestinian, Arab and foreign artists have produced similar artwork, but not directly on the separation wall; such artwork is called 'indirect artwork'. This paper aims to analyse several examples of artwork that were displayed in the period from 2002 to 2015. These examples were selected because they participated in international exhibitions and competitions and were awarded prizes and high ratings. Some of them use visual and printed media. This article combines the works produced using different media in a single study to discuss their collective contribution to the Palestinian cause. The analytical approach was utilised to analyse the selected artworks. The analyses indicated that the indirect artistic works make a significant contribution to the Palestinian resistance against the occupation in general and the construction of the separation wall in particular. The artists have creatively presented their work, which mimic the separation wall by showing the wall in its real and original grey colour, shape and size. The indirect artistic works send political messages through the lens of culture and modernisation.

Keywords: Indirect artwork, Israeli occupation, separation wall

INTRODUCTION

The Zionist movement with the help of foreign countries in the United Nations invaded and occupied Palestine in 1948. Since then, the Palestinians have been witnessing and living in unbelievable and unbearable suffering caused by this brutal occupation. The Israeli occupation has used all types of cruel measure against the Palestinians including killing and arresting people, bombing and demolishing houses, uprooting trees, closing academic institutions, imposing blockades, restricting the Palestinians' movement in their land and depriving them of their basic human rights. In 2002, the occupation caused a huge wall (extending over 772 km) to be built to separate the West Bank from the other parts of Palestine. The wall is made up of a variety of different components, including fences, ditches, razor wire, groomed sand paths, an electronic monitoring system, patrol roads and a buffer zone. It consists of 8-9-metre high concrete slab segments that are connected to a wall. The wall has been referred to as a 'separation' or 'apartheid wall' because it has segregated the Palestinians socially, economically and geographically, and increased the Palestinians' suffering in all aspects of life. One of the responses to the construction of this separation wall was the production of artwork as a show of non-violent resistance against the wall undertaken by Palestinians and foreigners. Artwork depicted directly on the wall include drawings, graffiti, photography, video, installation art, performing arts and sculpture. Such supportive artwork is also produced indirectly i.e. it is not displayed on the wall.

The separation wall in occupied Palestine has become an artistic space for foreign and local artists to express their opinions. The artwork depicted on the wall has received tremendous attention in various parts of the world. It has been observed that the artwork has increased as a means of resistance against Israeli occupation in general and the construction of the wall in particular. Nevertheless, Palestinians, including critics and artists have called for the wall not to be beautified or decorated with art. They have also demanded that the wall be kept in its obnoxious military nature so as to retain the people's spirit and determination to demolish and remove it. Some Palestinians have washed off some of the drawings on the wall, believing that such drawings are not useful to the Palestinian cause and that they may even humiliate the Palestinian people as some of the artwork does not relate to Palestinian heritage. This has kept many Palestinian and Arab artists from displaying their artwork on the wall to avoid criticism or objections, believing that their art, although not depicted or displayed directly on the wall, can still adequately serve the Palestinian cause. As a result, various works of art on the theme of the separation wall are not displayed on the wall (i.e. not directly on the wall). Such works are called 'indirect artwork' related to the separation wall.

There are other reasons for the production of such indirect artwork. First, Palestinian artists residing outside Palestine who are not able to come into occupied Palestine have produced artwork addressing the separation wall in solidarity with the Palestinian people and as a way to demonstrate the sufferings of the Palestinian people under the occupation. Second, some artists believe that through their indirect artwork, they are able to convey the message of occupation and suffering more effectively. Third, the occupation forces removed some artwork that presented a real challenge to the occupation; this indicated to Palestinian artists and the people that the artwork remaining on the wall was questionable, supporting the claim that the artwork on the work helped to beautify the wall. Fourth, Palestinian and Arab artists strove to create awareness among the international community of the consequences of the wall and the sufferings the Palestinians were experiencing as a result of the occupation in an effort to gather support against the occupation and the separation wall.

To sum up, the existence of this direct and indirect artwork has become a controversial issue among Palestinians. Do they really serve the Palestinian cause in resisting the occupation? Or do they actually romanticise the separation by beautifying and decorating the wall? These significant issues have not been thoroughly investigated by researchers. In a previous paper, artwork depicted or displayed directly on the separation wall was examined and analysed to identify their underlying meaning and implications. Therefore, this paper addressed and critically analysed the indirect artwork that is not displayed directly on the separation wall.

Problem of Study

The Zionist occupation in Palestine represents all types of war, terrorism, oppression and violation against the Palestinian people which has resulted in fear, suffering and instability in all aspects of life. This situation has also seriously influenced innovation in the arts used as a means of resistance against the occupation and people's attitudes towards it. A good example of such art is the artwork depicted on the separation wall in Palestine. The source of controversy over this artwork are the people who may not understand the purpose of the artwork, and who might therefore be provoked by the content of the artwork for ethical, ideological, cultural or political reasons. The Palestinians may perceive the content or topic of the works as not being related to the Palestinian cause and the works themselves as only a means of beautifying and decorating the ugly separation wall. Thus, many Palestinian artists have resorted to indirect artwork such as drawings, photography, videos, performing arts and carvings that depict the negative consequences of the wall on Palestinians. Studies on such works are sparse, prompting this paper to address and critically analyse such works to evaluate their contribution to the Palestinian cause. This paper also contributes by highlighting this issue and by shedding light on the

indirect artwork and its importance, which is not any less than that of the direct artwork, by including them in the literature that often discusses the direct artwork and the controversy whether these works resist or enhance the separation wall. However, indirect artwork is not included in this controversy. The content analysis approach was utilised to analyse the selected artworks.

RESULTS AND DISCUSSION

The analysis of selected examples of indirect artwork related to the separation wall in occupied Palestine is presented in this section. Pictures of the works have been used to support the analysis.

Drawing and Photography Arts

Figures 1 and 2 are paintings of the separation wall by the Palestinian artist, Sulaiman Mansur, who participated in a Rivia Gallery exhibition in Damascus. The paintings show Palestinians having to face daily humiliation. The artist used tores and unclear vision and cement walls that block light and air to tell his story. These works visualise the reality in Palestine and the sufferings of the Palestinian people under occupation. They display the checkpoints, barriers and the separation wall as graves that harshly restrict the Palestinians' movement in their lands, as if they were living in prisons. These works show what the artist Mansur experienced in his daily life under the occupation. He was repeatedly detained due to his anti-occupation artwork. Israeli interrogators tried to convince Mansur to draw flowers instead, but he never did (Suweileh, 2010). This is clear evidence of the contribution of these works to resisting the occupation.

Figure 3 is a painting by the Palestinian artist, Hani Za`rab, who participated in the Standby Series in France in 2008. This painting is entitled "The Waiting". It
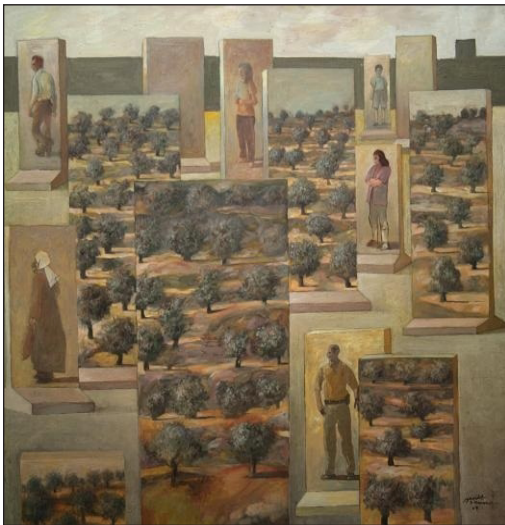

Figure 1. Checkpoints

Figure 2. Life under the occupation

shows a Palestinian lying on the ground looking at two high black and grey adjacent walls in the background. He is lying on the ground with his hands intersected at the back of his head, and one of his legs is straightened while the other is folded. He is lying down near a deep cliff that could be a table made of solid wood. He represents the Palestinian who is deprived of his land and is exiled from his people because of the separation wall. However, he still entertains the hope that someone will arise to rescue him from the situation. This painting has been analysed and interpreted in various ways, either generally or politically. For example, the critic, Kunaib, suggested that the observer seemed comfortable and relaxed in his reclining position, but in reality, no enjoyment can be possible in such an ugly and tough environment. He can feel no real comfort. He may just be unable to leave as he is imprisoned and helpless having attempted to cross the two walls. The picture depicts the position of an imprisoned person (Kaneib, 2010). This drawing successfully reflects the Palestinians' suffering due to the separation wall, although at the same time, they are still waiting hopefully for the wall to be torn down.
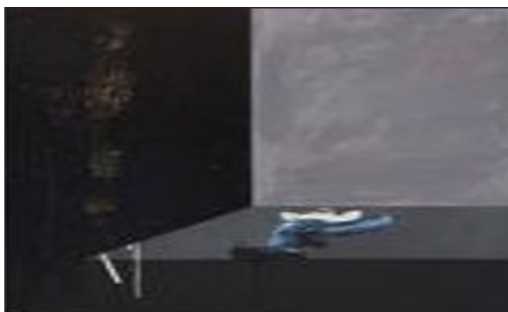

Figure 3. Waiting

Figure 4 is a photograph by the Palestinian artist, Nuwai Jubur. This photograph shows olive tree roots and branches with green leaves penetrating the separation wall. This indicates and declares new life for and a return to Palestine despite the misery and sorrow of the people. While this artwork shows the creativity of the artist, at the same time, it serves the Palestinian cause by addressing the real and ugly nature of the separation wall and the determination of the Palestinians to taste new life. The roots are a challenge to the wall; it is as if they are saying to the wall, "No matter how high and strong you are, you will be unable to remove my roots from my homeland."

Figure 4. Olive tree roots

Figure 5 is a photograph of a young Palestinian man throwing stones over the high separation wall on the Israeli soldiers who are guarding the Israeli settlements built on the Palestinian-seized lands. The artist captures the continuation of the resistance against the Zionist occupation no matter the height of the wall; the wall cannot prevent the Palestinians from resisting the occupation. Yousuf Razqah, the Palestinian

Minister of Media, believed that such photographic artwork is able to combine both content and beauty, helping to present

meaning directly and effectively to viewers. Indeed, a picture is worth a thousand words.

Figure 5. Throwing stones

Video Art

Figure 6 shows a clip of a video shown at the Ayyaam Hall in London that was produced by the Palestinian artist, Khaled Jarraar. It is a live show of the sufferings of one

Palestinian family whose members were separated by the separation wall. An old lady is bending down and extending her fingers to reach out and touch the fingers of her daughter as the daughter's fingers appeared

Figure 6. Her daughter

beneath the wall as the two try to talk to one another despite the wall. They are also passing pictures to each other under the wall. This is the only way they can communicate with each other. Here, the separation wall represents humiliation, oppression and domination of the Palestinian people. It is also a barrier that separates family members. The work reflects on and documents the suffering of the Palestinian people because of the separation wall (Bu `Ali, 2013).

Figure 7 is a clip from a video, "Checkpoint" by the Palestinian artist, Sharif Wakid. He shows the sufferings of the Palestinian people at many Israeli checkpoints. The artist addresses the issue of the Israeli checkpoints from the perspective of the world of fashion. In the video, men wearing dresses walk in queue one after another on a platform accompanied by music playing in the background. The zips, openings, head covers and buttons on their clothes make reference to the issue of life under occupation. Parts of the men's body (bottom of the back, chest and stomach) may be seen through the openings and gaps in the clothing made of silk or cotton. The ordinary cloth and raw material of the clothing mimic the most advanced fashion styles. Next to the show platform, there are still and static images of Palestinian men raising their shirts, cloaks and coats one after another at the Israeli checkpoints. The checkpoints show two contradicting worlds, the elegant world of fashion and the world of forced stripping contemplated through the concepts of the science of beauty, body, humiliation, censorship and freedom. The clothing is

designed to resemble the daily routine of Israeli soldiers making the Palestinians hang their clothes as they are scared of the individual Palestinian's body .

Figure 7. Checkpoint

Performing Arts

Figure 8 represents an indirect work of the performing arts genre entitled "*Al-Taswiyah*" ("Compromise") by the Palestinian artist, Steve Sabella. This work was presented in an exhibition named "*Mahki, Makhfi and Mu`aad*" ("Spoken, Hidden and Repeated") in Qatar, the capital city of Doha. The artist sought to explain the status of the Palestinian people reached as a result of the compromise between the Israelis and the Palestinians that was not in favour of the Palestinians as the occupying state did not implement any of the agreed resolutions. On the contrary, the occupying state built a separation wall that caused demographic an imbalance in Jerusalem and the Palestinian territories that were occupied in 1948 in favour of the Israelis. In this work, the artist intends to reflect this reality of the 1:6 ration by having one photograph of a Palestinian man (himself, naked) hanging on one wall while on the opposite wall are six individual

photographs of six Israelis, naked (Sabella, 2011). This confrontation highlights the imbalanced ratio of Palestinians and Israelis caused by the separation wall. This brave representation may be strange in the context of the Arab world, where traditional artwork is appreciated. It also suggests the potential

for change by including a range of meanings for two opposing views i.e. the appearance and function and the vision and realisation (Al-abtah, 2010). According to Russian researcher, Moscovitz (2007), drawings related to the separation wall reflected the cultural identity of Arabs in Palestine.

Figure 8. Al-Taswiyah

Sculpture

Palestinian artists believe that sculpture can be more influential in delivering the message of the suffering of the Palestinians to the international community. They also believe that the end of the separation wall is more practically represented through sculpture as it is not directly depicted on the separation wall. It is not also seen as a means of beautifying or decorating the separation wall compared with other types of art that can be depicted on the wall itself. Examples of these works of sculpture are discussed as follows.

Figure 9 is a sculpture of a rugby ball by the Palestinian artist, Khaaled Jarraar. This sculpture consists of concrete materials secretly engraved by the artist's own hands

using a chisel on the separation wall . It refers to a rugby ball that Palestinian children abandoned beside the separation wall because they were afraid of the occupation soldiers positioned at the towers of the separation wall. The artist, by manipulating the multipurpose concrete materials, strives to provoke dialogue about land possession and liberation and to document the sufferings of life in Palestine. The restrictions imposed on the Palestinians serve as fuel for such artistic works, producing narratives of political meanings expressed through images of culture and modernised life (Imraan, 2012).

Figure 10 is a sandglass using sand taken from parts of the separation wall made by the Palestinian artist, Magd Abdul Hamid.

He cut off some parts of the separation wall and ground it and placed it in the top half of a sandglass, declaring an end to the separation wall in time. Every single grain of sand drops from the top to the bottom half of the sandglass, indicating that the time for the demolition of the wall is nearing; this is an explicit call for the destruction of the wall. Some may think this is wishful thinking and that the artist's effort is too insignificant to have any real effect, but the depiction carries great weight as psychologically, it provides immense moral support for resistance to the wall. It is a dream that survives with the passing of time, day after day, and as the grains of sand fall, the time for the end of the wall comes closer. Furthermore, the artist may want to indicate that this is his way of getting rid of the wall and he encourages other Palestinians to look for other ways to bring down the wall.

Figure 11 shows a sculpture done on marble entitled as "*Jidaar fi Ra'sik*" ("Wall on Your Head") by the Palestinian artist, Ahmed Kana`aan. It displays the head of a Palestinian lady, symbolising the Palestinian land, with a wall on it. Palestinian women carry heavy loads on their heads, then set them down when they are tired. This sculpture indicates the absolute rejection of the oppressive siege caused by the separation wall. The wall carried by the woman on her head will not last forever, but will drop and eventually fade. The Palestinians do not possess the tools for getting rid of the occupiers at the moment and do not have the support to do so, but a day will come when the occupation will be defeated.

Figure 9. A rugby ball

Figure 10. Sandglass

Figure 11. Wall on your head.

Installation Art that Represents the Separation Wall

Some artwork that represents the separation wall done by artists have come from various places outside Palestine to show the solidarity of the artists with the Palestinians (Yaqeen,

2012). Their rejection of the separation wall too shows their role in focussing on the sufferings of the Palestinians and supporting them. Some Arab artists have excelled in building objects that portray the separation wall in terms of physical and moral aspects and they strive to deliver their message to the international community, as seen in Figure 12 below.

The artistic work "Cutting Edge" in Figure 12 displayed in the Castillo de Rivol Museum in Italy was made by the Saudi artist, Ibrahim Abu Mismaar. It incarnates the separation wall in occupied Palestine. The artist tried to make sure that his work would reach a great number of people around the world to let them know the effects of the wall on the life of the Palestinians. He also

focussed on showing the tiny details of the wall to reflect its reality. The work was based on a marble base of 3 cm in height and 150 cm in width; a total of 67 blade cutters were used to symbolise the number of villages and cities the wall separated from one another. The cutters are painted in the same colour as the wall. Abu Mismaar also made chips and circles in his work so that the work would resemble the actual wall (Imraan, 2012). Abu Mismaar had stated that he presented the concrete wall as blades to connote the function of the wall, which had cut through cities and Palestinian villages in the West Bank, turning them into compartments isolated from their surroundings (Imraan, 2012).

Figure 12. Cutting edge

Figure 13 shows the Lebanese artist, Waleed `Awni's, work displayed at the 10th Binali in Cairo. This work represents the separation wall in occupied Palestine. The artist tried to show evidence of terrorism by the Zionist state through the destruction of

humans and land caused by the wall. The artist left vast spaces on the structure without any drawings for viewers to participate in the artistic work by drawing and writing their thoughts and feelings about the obnoxious wall. The artist was able to present the

reality experienced by the Palestinian people as a result of the existence of the separation wall, as he portrayed the wall as it actually is in structure, colour and height,

depicting the misery of the Palestinians. The work includes a tree cut in half by the wall (Waleed, 2006).

Figure 13. Structure of separation wall.

Brazilian artist of Palestinian origin, Sami Mussa, when he returned to his Palestinian home, expressed his feelings in the artistic work shown in Figure 14. Sami highlighted the fact that resistance was the ideal solution for ending the occupation and bringing down the wall by presenting a hole in the wall from which the head of

a Palestinian resistance fighter is thrust. His message is that there is no option but to resist the occupation and the wall, and to completely free the Palestinian land, indicated by the free end of the cloak that dangles beneath the head drawing the map of Palestine.

Figure 14. The hole

CONCLUSION

Indirect artwork plays a vital role in depicting resistance art that speaks out against occupation in general in the West Bank and the construction of the separation wall in particular. Indirect artwork represents the reality of Palestinian life and the suffering of the people due to the occupation and devastating consequences of having the separation wall. The artists have creatively presented their message through art that represents the separation by portraying the wall in its real and original grey colour, shape and size. Indirect artistic works bring forth political messages through the lens of culture and the forces of modernisation, helping to rally international public opinion in confronting the arrogance of the occupation and the wall and to exert pressure on the occupiers. Indirect artwork also echo the demand for freedom and the establishment of a Palestinian state.

REFERENCES

Al-Abtah, S. (2010). A tale of journeys through time and place. *Middle East Journal*, no. 117141. http://w/ww.al-sharq.com.

Bu `Ali, S. (2013, July 17). Khaled Jarrar transfers the separation wall from Jerusalem to London in the "a hole in the wall" exhibition. *Middle East Journal*, no. 12650, http://archive.aawsat.com/details.asp?section=54&article=736522.

Imraan, N. (2012, November 29). A young Saudi man is designing a sculpture that emulates the separation wall in Palestine. *Middle East Journal*. Jeddah, Kingdom of Saudi Arabia, no. 12420. http://cms.aawsat.com/details.asp?section=54&article=706403.

Kaneib, K. (2010, December 12). Artistic creations with political projections (Hijaazi, Y., Trans.). *Qantrah*, https://ar.qantara.de/node/13161.

Moscovitz, T. (2007). *Through the wall: The West Bank wall as global canvas*. Department of Visual Arts, College of Arts & Sciences, Northeastern University, Boston, MA.

Sabella, S. (2011, February 15). Steve Sabella settlement. *Art Palestinian International.* http://www.artpalestine.org/2011/02/steve-sabella-settlement/

Suweileh, K. (2010, December 19). Sulaiman Mansur and Taiseer Barkaat. Diary of the occupation. *Discover Syria.* no. 1024. http://www.discover-syria.com/news/5705.

Waleed, A. (2006, December 14). Prize for preparing an artistic work that represents the Israeli separation wall in Palestine. *Al-Mustaqbal*, Beinaal Competition-Cairo. no. 2475, p.21, http://almustaqbal.com/article/207916/

Yaqeen, T. (2012). *A beautiful art and an ugly wall*. Jerusalem, Palestine: Beit al-Maqdis for Printing.

SOCIAL SCIENCES & HUMANITIES

Developing Lexical Complexity in EFL Students' Essays via Creative Thinking Techniques

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ABSTRACT

This study attempted to investigate the effect of teaching creative thinking techniques on the development of lexical complexity in EFL students' essays in both timed and untimed conditions. For this quasi-experimental study, 54 female undergraduates of English literature, assigned to two groups of 27 each, were selected from two intact writing classes. In addition to their regular writing class, both groups were taught for 10 extra sessions through an online tool named Padlet. The experimental group (EG) was taught creative thinking techniques and the comparison group (CG) practiced extra process writing activities. Moreover, TOEFL essay questions were administered as pre and posttests. In both timed and untimed essays, three indices of lexical complexity, namely lexical density, lexical sophistication and lexical variation were measured through an automatic analyzing software. Mixed MANOVA showed that practicing creative thinking techniques had a significant effect on improving lexical complexity of EFL students in both conditions. Thus, material developers and EFL writing teachers could benefit from incorporating activities related to these techniques in EFL writing textbooks and also EFL classes, teaching students to develop lexical complexity in their essays.

Keywords: Creative thinking techniques, EFL writing; lexical complexity, Padlet

INTRODUCTION

In recent years, developing creative thinking in English language teaching has gained attention (Iakovos, 2011; Tin, 2013). One of the skills in which creative thinking could play a crucial role is writing because many writing problems are related to thinking problems and learners should become acquainted with more thinking

techniques (Flower & Hayes, 1977; Rao, 2007). In fact, creative thinking "promotes problem solving which is a higher order thinking skill" (Szerencsi, 2010, p. 286) and hence could equip students for better, and more sophisticated, writing (McNamara, Crossley, & McCarthy, 2010). Indeed, it is crucial to investigate the impact of these kinds of techniques on writing complexity, specifically in an EFL context and at university level. Furthermore, to investigate students' writing performance, some factors such as timed/untimed conditions should be taken into account. In educational institutions or some international examinations such as TOEFL test, essays should be written under quite severe time constraints. Therefore, it may be necessary to investigate the writing performance of students in both timed and untimed conditions. In this study, the researchers aim to investigate the effect of teaching creative thinking techniques on improving the lexical complexity of EFL students' essays and explore its effect under timed and untimed conditions.

LITERATURE REVIEW

Creative Thinking and Writing

Creative thinking has been defined by Alvino (1990, p. 50) as "a novel way of seeing or doing things that is characterized by four components including FLUENCY (generating many ideas), FLEXIBILITY (shifting perspective easily), ORIGINALITY (conceiving of something new), and ELABORATION (building on other ideas)". Different techniques for improving creative thinking may include: visualization and creative dramatics, divergent thinking strategies, brainstorming, use of metaphors and analogies (synectics), Torrance and Safter's incubation model, commercial and competitive programs, and SCAMPER (Eragamreddy, 2013).

Reviewing various studies shows that among the above mentioned techniques, brainstorming, synectics, and SCAMPER were classified as divergent thinking techniques (e.g., Hummell, 2006; Smith, 2006; Takahashi, 2007). In other words, they bring unrelated elements or diverse ideas together which is the reason of their use for improving L1 and L2 writing in various studies (Keyes, 2008; Majid, Tan, & Soh, 2003; Rao, 2007).

Brainstorming

Brainstorming practice provides a trigger for thinking in novel and various directions and increases students' confidence for producing ideas and "it is the students' experience of purposely hatching these ideas that is useful" (Kawenski, 1991, p.264). According to (Cropley, 2001, p. 98), brainstorming has four fundamental rules:

Criticism is ruled out

- Freewheeling is welcomed: the wilder the ideas the better

- Quantity is wanted, because the greater the number of ideas produced, the greater the probability that original, useful ideas will emerge

- Combination and improvement are sought

Synectics

According to Joyce and Weil (2003), synectics gives us the chance to channel new ways of seeing things, communicating, and facing problems. In fact, "synectics is a procedure for bringing together elements which do not seem to belong together" (McLeod & Cropley, 1989, p.107) by producing different kinds of analogies through two processes called 'making the familiar strange' and 'making the strange familiar' (Eragamreddy, 2013).

SCAMPER Technique

Eberle (1972) developed the SCAMPER technique based on the list of idea spurring questions which Alex Osborn (1953) introduced. The acronym stands for Substitute, Combine, Adapt, Modify/ Magnify/Minify, Put (to other uses), Eliminate/ Elaborate, and Re-arrange/ Reverse which will be used as a checklist for forming creative ideas (Mowat, 2011; Smith, 2006).

Lexical Complexity in Writing

As stated by Read (2000), a good writing should have special lexical characteristics and used vocabulary effectively. Accordingly, Fellner and Apple (2006) indicated, "if lexical complexity and comprehensibility are not taken into account, students could conceivably be identified as having improved their writing fluency merely on the strength of having written the same simple sentence repeatedly over the timed period" (p. 20).

A term used by Read (2000) for lexical complexity is lexical richness which contains three well known measures-lexical density (LD), lexical sophistication (LS), and lexical variation (LV), as stated by Laufer and Nation (1995).

As Bulon, Hendrikx, Meunier and Goethem (2017) explained, complexity proved to be a basic and valid indicator of language development and progress. Hence, they focused on complexity rather than accuracy and fluency in students' writing performance.

Purpose of the Study

Based on the arguments previously mentioned, creative thinking could play a crucial role in writing and practicing idea generation techniques which could also have an effect on writing, specifically on writing complexity. Therefore, the researchers sought to investigate the effect of divergent creative thinking techniques (Takahashi, 2007) on the lexical complexity of EFL students' essays in both timed and untimed conditions. Thus, this study tries to answer the following research question:

1. Does teaching creative thinking techniques affect EFL students' lexical complexity in timed writing?

2. Does teaching creative thinking techniques affect EFL students' lexical complexity in untimed writing?

METHODS

Participants and Research Setting

The participants of this study were 54 female undergraduate students of English literature at Alzahra University. After administering a writing proficiency test of TOEFL (Lougheed, 2004), the participants were selected from among 63 sophomores who scored one standard deviation above, and below, the mean as intermediate language proficiency learners. Participants were from two intact writing classes. The instructor of both classes was kept constant and she taught creative thinking techniques to the experimental group (EG) and practiced extra process writing activities with the comparison group (CG) through an online tool named Padlet in one academic term for 10 sessions.

Instrumentation

The study was conducted through applying different instruments including writing proficiency test, timed/untimed pretest and timed/untimed posttest, all of which are explained in more detail in the following sections.

Writing Proficiency Test and Timed/Untimed Pretest. A topic from the range of writing topics of a paper-based TOEFL test (Lougheed, 2004) with the title "*If you could invent something new, what product would you develop? Use specific details to explain why this invention is needed*" was selected and administered as the writing proficiency test and also timed pretest. To eliminate the effect of time restriction, the students were required to write another essay on the same topic as the untimed pretest without any time limitation at home.

Timed/Untimed Post-test. The post-test was like the pretest, but with a different topic "*If you could go back to some time and place in the past, when and where would you go? Why? Use specific reasons and details to support your choice*" being selected from the TOEFL test and administered after the completion of ten sessions for both groups. Students were required to write a timed post-test in 30 minutes in class and an untimed post-test at home.

Procedure

In the first session of the class, the participants were given a topic from the writing topics of a TOEFL exam to see how homogenized they were. There was a 30-minute time limit and a 250-300 words limit. These essays were used for two purposes:

First, for determining the students' level of proficiency, two raters scored the papers. The raters were MA graduates in TOEFL and experienced teachers who had experience in assessing the writing section of TOEFL test. The raters used TOEFL paper-based test writing scoring guide (ETS, 2014). This rubric has a 6 scale point from 0-6 and a score between 2 points on the scale (5.5, 3.5) could be reported. In order to ensure the consistency of scores between the two raters, a Pearson–product moment correlation coefficient was run to investigate the inter–rater reliability. The result of Pearson–product moment

correlation coefficient (r = 0.92, p < 0.05) indicated a high correlation between the two raters.

Then, among the 63 students, 54 students who scored one standard deviation above and below the mean, were selected as intermediate and randomly assigned into two groups of 27. Second, the essays considered as pretest, were analyzed by an analyzing software named Lexical Complexity Analyzer (LCA) (Lu, 2012). Lu considered different components in learner's language use such as lexical density (LD), lexical variation (LV), and lexical sophistication (LS) for measuring lexical complexity. Based on his definition, lexical density is the ratio of lexical words (Nlex) to the number of words (N). Lexical variation or original Type-Token Ratio (TTR) is measured as the ratio of the number of word types (T) to the number of words (N) in a text. Lexical sophistication is computed as the ratio of the number of sophisticated word types (Ts) (i.e., the "beyond 2000" words) to the total number of word types in a text.

The next stage comprised of learners writing an untimed essay on the same topic as their timed essay. These essays were also analyzed via the LCA.

Teaching Setting

An online teaching tool named Padlet was introduced to both groups. Padlet "allows a student to post thoughts on a common topic using electronic sticky notes on a shared digital wall" (Davis, 2013, p. 12). According to Halsted (2014), Padlet which is a new technological tool gives students an opportunity to write and post their notes via a digital board and share their unique ideas and their creative work on the Padlet wall. In order to eliminate the effect of using Padlet on the experimental group, both groups were required to use Padlet. Whereas the EG practiced creative thinking techniques through Padlet, the CG practiced extra process writing activities with it.

Activities

The researcher taught three creative thinking techniques namely brainstorming, synectics, and SCAMPER to the experimental group. The control group was taught process writing in line with the syllabus of the class.

Creative Thinking Activities.

Brainstorming. Topics and activities that would motivate students to think and generate ideas were selected. Two kinds of activities named 'idea links' and 'sense making' were selected from VanGundy (2005) and students were required to generate ideas based on the sample provided and practice the assigned topics. The following is one example which was provided for students:

To illustrate "Sense Making Ideas", consider a publisher's problem of how to increase book sales.

Here are some ideas that this technique might spark:

- *Smell:* Produce books that contain fragrances that reflect literary themes.

- *Sight:* Include a page of slides to illustrate topics.

- *Taste:* Include free stamps to encourage book buyers to mail in coupons redeemable for discounts on future book purchases.

- *Touch:* Make book covers with different textures that invite people to touch them. Once people pick up a book, they will be more likely to buy it.

- *Hearing:* Put audio-digital computer chips (like those in greeting cards) in the inside covers of books. When someone opens the front cover, the book says, "Buy me, please!" or mentions some benefit of the book's contents.

Synectics. The exercises and lesson plans for teaching synectics were mostly from "Models of Teaching" by Joyce and Weil (2003). In this phase, students were asked to practice "stretching exercises". These exercises were not related to any special topic and just helped students to practice metaphoric thinking before they follow sequence of synectics' phases. Three kinds of analogies were used as the basis of synectics activities including personal analogy, direct analogy, and compressed conflict. In personal analogy, students needed to empathize with objects or ideas that they use. For instance, "be a cloud. Where are you? What are you doing? How do you feel when the sun comes out and dries you up?" (p. 243). In direct analogy

students should compare two objects or concepts. It is not necessary that the comparison be similar in all respects. For example, students were asked to think of their textbook as an old shoe or as a river and in this way, the teacher provides a structure, a metaphor, with which the students can think about something familiar in a new and strange way. Another analogy, compressed conflict, is a two-word description of an object, where the two words are in conflict with each other. For instance, 'How is a computer shy and aggressive?'

After introducing the model and practicing it, students were required to apply it in writing their assigned topic.

SCAMPER Technique. The third technique was SCAMPER. The activities for this technique were taken from Mowat (2011). For instance, students were asked to take an idea in a text or story to the future and thus different questions based on this acronym were asked such as, could you SUBSTITUTE the idea in the story with another idea? Could you COMBINE your own knowledge of science with knowledge of the tale? Could you ADAPT the architecture to reflect futuristic type? Could you MODIFY the narration to be reflective of possible speech in future? Could you add humor to the story by PUTTING TO OTHER USES the items? What details could you ELABORATE upon at the beginning of the story that would immediately communicate to readers the tale's futuristic setting? Could you REVERSE or REARRANGE key elements

in the tale's final scenes to provide a new twist to the story? Through practicing some activities students were taught how to use this technique for generating ideas.

Writing Activities. For the comparison group, the students were required to practice process writing. The purpose of assigning these activities was to help students practice the elements taught in class. They were required to write good topic sentences, thesis statements, and were taught how to improve the unity and coherence of their written production. Every draft was revised by the researcher twice. When the first draft was studied by the researcher, she provided corrective feedbacks such as Grammar or Coherence as to where the problem lies and the students were required to rectify the problem, then once more the piece of writing was marked by the researcher and feedback provided. Writing three versions for every piece of writing helped the learners to see where the problem was and try to overcome it.

Posttest

After 10 practice sessions, a post-test was administered. Students were required to write one timed essay in 30 min in class and after one session interval they were asked to write an untimed essay (at home) on the same topic. As the last step, lexical complexity of students' timed and untimed handwritten essays, were typed by the researcher to be measured through LCA.

Topic Selection

Regarding the selection of topics for pretest and post-test, in order to use standardized tests and control the difficulty level of the topics, two TOEFL essay questions from the same genre, i.e., descriptive, were selected.

Data Analysis

For analyzing the data, the mean and standard deviation of the scores on the writing proficiency test were tabulated. To find out the go-togetherness of the two sets of scores provided by the two raters, the Pearson correlation coefficient was applied. Scores obtained from the investigation of three indices of lexical complexity (LD, LS, and LV) in timed and untimed essays through LCA (Lu, 2012) were transferred to SPSS 18. Since there were three dependent variables in each set of scores, multivariate analysis of variance (MANOVA) was chosen as the suitable statistical technique and for investigating changes from pretest to posttest and comparing the experimental and the comparison groups as two independent groups, mixed MANOVA was run. In fact, within-subject effect (changes from pretest to posttest), between-subject effect (between the experimental and the comparison group), and interaction of time and group effect were investigated.

RESULTS

According to the purpose of the study, a number of instruments for analyzing the relevant data were utilized to answer the research questions.

Participant Selection

Table 1 shows the descriptive statistic of writing proficiency scores with the mean being 3.77 and the standard deviation 0.80, respectively. Students who scored one standard deviation above and below the mean were selected and randomly divided into two equal groups of 27. Means for Three Lexical Complexity Measures of the Experimental and the Comparison Group (Pretest and Post-test) in Timed and Untimed Essays Inter-Rater Reliability.

Two experienced teachers of EFL writing assessed participants' essays. In order to ensure the consistency of the scores between the two raters, a Pearson-product moment correlation coefficient was run to investigate the inter-rater reliability. The result ($r = 0.92$, $p < 0.05$) indicates a high correlation between the two raters.

Table 1
Descriptive statistics of writing proficiency scores, timed and untimed pretests and posttests essays

Measures	Groups	Time	Essays	Mean
Lexical density	Experimental	Pretest	Timed	0.44
			Untimed	0.44
		Posttest	Timed	0.50
			Untimed	0.51
	Comparison	Pretest	Timed	0.43
			Untimed	0.44
		Posttest	Timed	0.45
			Untimed	0.46
Lexical Sophistication	Experimental	Pretest	Timed	0.20
			Untimed	0.21
		Posttest	Timed	0.23
			Untimed	0.23
	Comparison	Pretest	Timed	0.22
			Untimed	0.22
		Posttest	Timed	0.22
			Untimed	0.23
Lexical variation	Experimental	Pretest	Timed	0.73
			Untimed	0.76
		Posttest	Timed	0.84
			Untimed	0.88
	Comparison	Pretest	Timed	0.73
			Untimed	0.77
		Posttest	Timed	0.77
			Untimed	0.80

The Effect of Teaching Creative Thinking Techniques on EFL Students' Timed Essays

Table 1 indicates that the mean score for lexical complexity indices including LD, LS, and LV in pretest are 0.44, 0.20, and 0.73, respectively for the EG and 0.43, 0.22, and 0.73, respectively for the CG. Likewise, mean scores in post-test are 0.50, 0.23, and 0.84, respectively for the experimental and 0.45, 0.22, and 0.77, respectively for the comparison group. In order to make any statistical claim on the obtained results, multivariate analysis was conducted.

According to Table 2, Wilks' Lambda test indicates that there is a statistically significant difference (F (3, 50) = 31.77, $p < 0.05$, partial η = 0.65) between the groups and according to Cohen's (1988, as cited in Leech, Barrett, & Morgan, 2005) criteria for the effect size (small = 0.14, medium = 0.36, large = 0.51, or very large = 0.70), there is a large significant difference between the groups in terms of lexical complexity of their timed essays. Furthermore, there is a substantial main effect for time, (F (3, 50) = 169.79, $p < 0.05$, partial η = 0.91) which indicates that there is a statistically significant difference in students' performance over time on lexical complexity measures from pretest to posttest. Moreover, the two-way time by group interaction was statistically significant, (F (3, 50) = 37.76, $p < 0.05$, partial η = 0.69) (See Table 2) which indicates the EG outperformed the CG over time.

In order to clarify which lexical complexity measure contributed to the significant overall effect, univariate F tests for each variable were carried out. The univariate statistics indicate that there is a significant difference from pretest to post-test for lexical density (F (1, 52) = 88.30, $p < 0.05$, partial η = 0.62) and lexical variation (F (1, 52) = 323. 24, $p < 0. 05$, partial η = 0.86) but not for lexical sophistication (F (1, 52) = 3.95, $p > 0.05$, partial η = 0.071).

Interaction of time and group shows that there is a significant difference between the EG and the CG in terms of lexical density (F (1, 52) = 43.08, $p < 0.05$, partial η = 0.45) and lexical variation (F (1, 52) = 50.82, $p < 0.05$, partial η = 0.49) but not on lexical sophistication (F (1, 52) = 1.17, $p > 0.05$, partial η = 0.02).

Table 2

Multivariate statistics for the effect of group, time, and time* group in timed essays

Effect		F	Hypothesis df	Error df	Sig	Partial Eta squared
Group	Wilks' Lambda	31.771[a]	3	50	0.000	0.656
Time	Wilks' Lambda	169.798[a]	3	50	0.000	0.911
Time*group	Wilks' Lambda	37.768[a]	3	50	0.000	0.694

Table 3
Univariate tests for lexical density, lexical sophistication, and lexical variation in timed essays

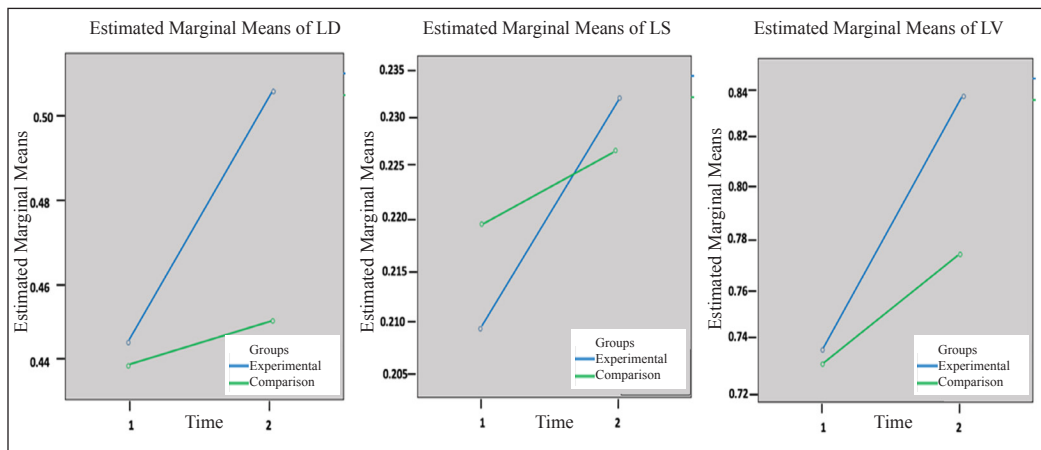| Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Time	LD	0.037	1	0.037	88.30	0.00	0.629
	LS	0.006	1	0.006	3.95	0.05	0.071
	LV	0.149	1	0.149	323.24	0.00	0.861
Time* group	LD	0.018	1	0.018	43.08	0.00	0.453
	LS	0.002	1	0.002	1.17	0.28	0.022
	LV	0.023	1	0.023	50.82	0.00	0.494
Error			52				

Figure 1. Linear graphs show the different mean scores from pretest to post-test for LD, LS and LV in timed essays (from left to right)

Thus, as depicted in Figure 1, there is an increase in lexical complexity measures from pretest to post-test and the EG outperformed the CG in the two measures of lexical density and lexical variation in the post-test.

The Effect of Teaching Creative Thinking Techniques on EFL Students' Untimed Essays

In order to answer the second research question and investigate the untimed essays, another mixed MANOVA was run. Table

1 showed that the mean scores for lexical complexity measures in the pretest for the EG are 0.44, 0.21, and 0.76, respectively compared to 0.44, 0.22, and 0.77 for the comparison group. Meanwhile 0.51, 0.23, and 0.88 were reported for the EG compared to 0.46, 0.23, and 0.80 for the CG in post-test. These numbers illustrate that the experimental and comparison groups are not much different at the time of pretest but they are different at the time of post-test in untimed essays. Furthermore, multivariate analysis was conducted in order to check if

time, group and the interaction of time and group make any significant difference in the lexical complexity of students' untimed essays.

As Table 4 shows, significant multivariate effects were found for the group, (F (3, 50) = 35.70, p < 0.05, partial η = 0.68) and time (F (3, 50) = 117.21, p < 0.05, partial η = 0.87) as well as for the interaction between time and group, (F (3, 50) = 36.63, p < 0.05, partial η = 0.68). The results show that there is a significant difference between the EG and the CG from pretest to post-test. In addition, significant effect was found for time*group interaction, displaying that the EG showed much more improvement from pretest to post-test in terms of lexical complexity of their untimed

essays and that the treatment was highly effective.

Furthermore, investigating a univariate F test for each variable in this analysis indicates which dependent variable (or lexical complexity measure) contributed to the significant overall effect.

According to Table 5, significant differences were found for LD (F (1, 52) = 101.56, p < 0.05, partial η = 0.66), LS (F (1, 52) = 21.13, P < 0.05, partial η= 0.28) and LV (F (1, 52) = 264.37, p < 0.05, partial η = 0.83). There is significant interaction of time*group for LD, (F (1, 52) = 37.18, p < 0.05, η = 0.41) and LV (F (1, 52) = 84.79, p < 0.05, partial η = 0.62) which shows that the EG had higher improvement in these two lexical complexity measures. Estimating

Table 4
*Multivariate statistics of group, time, and time*groups effect in untimed essays*

Effect		F	Hypothesis df	Error df	Sig	Partial Eta
Group	Wilks' Lambda	35.70[a]	3	50	0.00	0.682
Time	Wilks' Lambda	117.21[a]	3	50	0.00	0.876
Time*group	Wilks' Lambda	36.63[a]	3	50	0.00	0.687

Table 5
Univariate tests for lexical density, lexical sophistication, and lexical variation in untimed essays

Effect	Dependent variables	Type III Sum of Squares	Df	F	Sig	Eta
Time	LD	0.052	1	101.56	0.00	0.66
	LS	0.007	1	21.13	0.00	0.28
	LV	0.142	1	264.37	0.00	0.83
Time*groups	LD	0.019	1	37.18	0.00	0.41
	LS	0.001	1	3.13	0.08	0.05
	LV	0.046	1	84.79	0.00	0.62
Error			52			

effect size also shows large significant differences between the two groups for lexical density and lexical variation.

As Figure 2 indicates, differences exist between the two groups in the two lexical complexity measures at the post-test and therefore it could be claimed that those who practiced creative thinking techniques wrote more complex essays in untimed condition.
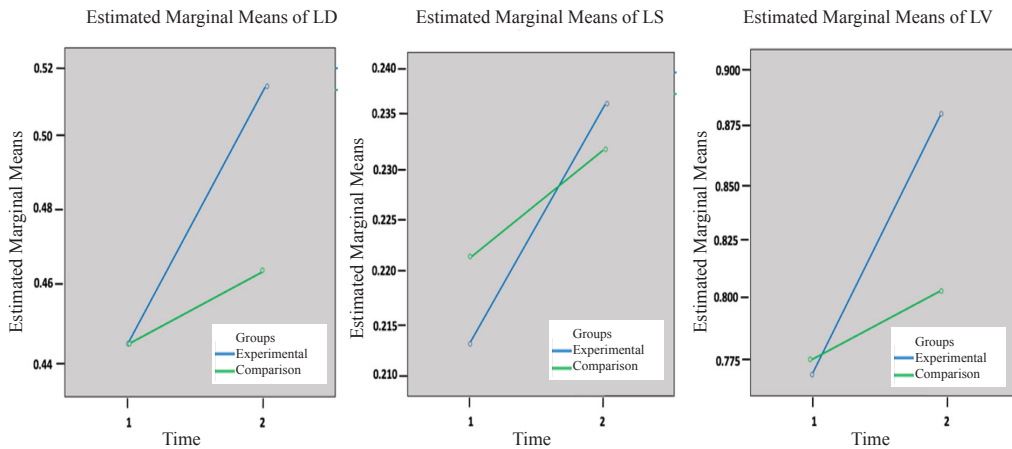

Figure 2. Linear graphs show the different mean scores from pretest to post-test for LD, LS, and LV in untimed essays (from left to right)

DISCUSSION

The research questions of this study attempted to investigate the effect of teaching creative thinking techniques on the lexical complexity of EFL students' writing performance in two timed and untimed conditions and the results indicated a positive effect. The significant differences were specifically obvious in lexical density and lexical variation. Therefore, it could be concluded that teaching creative thinking techniques can be beneficial in enhancing the lexical complexity of both timed and untimed essays.

In fact, Tin (2013) refered to creative thinking and mentions that the necessity to say something new which we had not yet explored and for which we did not have the language to express, forced us to retrieve less accessible words and develop complexity.

It can be stated that some of the findings of this study are similar to previous studies which focused on considering creative thinking as an important ability that potentially exists in every individual and has an effect on language teaching and learning (e.g., Albert and Kormos, 2011; Otto, 1998; Pishghadam & Javdan Mehr, 2011; Pishghadam, Khodadady, & Zabihi, 2011). One of the differences between previous researches and the present study is that the focus of those studies has been more on the relationship between creative thinking and language learning and language use but not

the causal effect of this ability on language. For instance, a study by Pishghadam and Javedan Mehr (2011) focused on the relationship between creative thinking ability and learners' writing performance and similarly showed a positive relationship between them.

The findings of the present study are in line with the results of some studies which focused on the causal effect of teaching creative thinking techniques on EFL students' writing performance such as Maghsoudi and Haririan (2013), Manouchehry, Farangi, Fatemi, and Qaviketf (2014), and Rao (2007). Those studies were conducted on EFL students, but they just investigated the effect of brainstorming on students' writing performance and not the three techniques together.

Some studies used synectics and SCAMPER for improving the writing performance of students but they were all conducted in the L1 context. For instance, Conley (2001) investigated the effect of six steps of synectics for making metaphoric language in L1 writing and Majid et al. (2003) investigated the effect of SCAMPER on improving children's writing performance in terms of accuracy in grammar, richness in vocabulary, and complexity of sentences. In these studies, it was shown that teaching the synectics technique could improve students' writing performance but SCAMPER did not show any positive effect on participants' writing.

One important factor investigated in this study was comparing the effect of two different conditions for writing (i.e., timed/ untimed). It is believed that timed essays are an indicator of students' normal vocabulary range (Muncie, 2002) and considered important in the assessment of students' written compositions. Besides, it should be emphasized that lexical complexity in timed essays is an important factor. In fact, the effective retrieval of vocabulary is crucial in timed written compositions such as essays for placement in writing courses or essays which are written as an integral part of class assignment (Engber, 1995).

This study focused on developing foreign language learners' lexical complexity and its well-known variables (i.e., lexical density, lexical sophistication, and lexical variation) via teaching creative thinking techniques.

To accomplish the above objective, we ensured having homogenized groups by testing their writing proficiency level before these teaching sessions, testing lexical complexity through pretest and posttest via using a software to be objective. Moreover, as mentioned before, we had a process writing class, thus the accuracy of students' writing was checked in various drafts which were written as an assignment in class during the time of the study and their progress were examined. Furthermore, the goal of this research was to improve current understandings of the effect of creative thinking techniques on lexical complexity measures for future EFL writing studies and as Lu (2012) mentions, our hope is that knowledge obtained about lexical richness could contribute to understanding of the entire picture.

CONCLUSION

The result of this study showed that practicing three creative thinking techniques, named brainstorming, synectics, and SCAMPER, together could improve the lexical complexity of essays written under both timed and untimed conditions. The results could be useful and applicable for material developers, syllabus designers and writing teachers. In fact, material developers can prepare textbooks which provide learners with activities and the appropriate procedure of using these techniques. Syllabus designers are recommended to choose activities which tap students' creative thinking abilities because students can practice idea generation and hence become proficient in finding new ideas for their writing assignments. Moreover, students are obliged to search for new vocabularies to write about their novel ideas which may lead to the complexity of their writing.

EFL teachers could take advantage of creative thinking techniques in their essay writing classes. Although brainstorming is usually restricted to thinking about the topic for 5 or 10 minutes before the actual writing, it should be mentioned that brainstorming has some rules which could be applied and teaching these activities could assist students to generate novel ideas. Therefore, teachers could use these different activities in their classrooms based on the ability of their students in addition to assigning part of class time to practicing other techniques such as synectics and SCAMPER which could be very interesting to the students and influential in improving their writing complexity.

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REFERENCES

Albert, A., & Kormos, J. (2011). Creativity and narrative task performance: An exploratory study. *Language Learning, 61*(1), 73-99.

Alvino, J. (1990). A glossary of thinking-skills terms. *Learning, 18*(6), 50.

Bulon. A, Hendrikx. I, Meunier. F, & Van Goethem. K (2017). Using global complexity measures to assess second language proficiency: Comparing CLIL and non-CLIL learners of English and Dutch in French-speaking Belgium. *Travaux du CBL, 11*(1). 1-25.

Conley, D. (2001). Deliciously ugly: Pursuing creativity in feature writing. *Australian Journalism Review, 23*(1), 183-197.

Cropley, A. J. (2001). *Creativity in education and learning: A guide for teachers and educators.* London: Kogan Page.

Davis, A. W. (2013). *Web 2.0: Tool and resources guide.* Retrieved October 9, 2017 from: http://www. manzanitaelementaryschool.com/documents/ WEB-2.0-Tool-Resource-Guide-2013.pdf.

Eberle, R. F. (1972). Developing imagination through scamper. *The Journal of Creative Behavior, 6*(3), 199-203.

Educational Testing Service (ETS) (2014). *Writing scoring guide*. Retrieved October 9, 2017, from https://www.ets.org/toefl/pbt/scores/writing_score_guide

Engber, C. A. (1995). The relationship of lexical proficiency to the quality of ESL compositions. *Journal of Second Language Writing, 4*(2), 139-155.

Eragamreddy, N. (2013). Teaching creative thinking skills. *International Journal of English Language & Translation Studies (IJ-ELTS), 1*(2), 124-145.

Fellner, T., & Apple, M. (2006). Developing writing fluency and lexical complexity with blogs. *The JALT CALL Journal, 2*(1), 15-26.

Flower, L. S., & Hayes, J. R. (1977). Problem-solving strategies and the writing process. *College English, 39*(4), 449-461.

Halsted, E. A. (2014). *Why Padlet is an important tool for your classroom*. Retrieved October 9, 2017, from http://edtechreview.in/trends-insights/1468-why-padlet-is-an-important-tool-for-your-classroom.

Hummell, L. (2006). Synectics for creative thinking in technology education. *The Technology Teacher, 66*(3), 22-27.

Iakovos, T. (2011). Critical and creative thinking in the English language classroom. *International Journal of Humanities and Social Science, 1*(8), 82-86.

Joyce, B., & Weil, M. (2003). *Models of teaching*. New Delhi: Prentice-Hall.

Kawenski, M. (1991). Encouraging creativity in design. *The Journal of Creative Behavior, 25*(3), 263-266.

Keyes, D. K. (2008). Reflecting and generating new understanding with synectics. In K. Kumpulainen, and A. Toom (Eds), *ETEN 18: The proceedings of the 18th annual conference of the European teacher education network* (pp. 101–107). Finland: University of Helsinki.

Laufer, B., & Nation, P. (1995). Vocabulary size and use: Lexical richness in L2 written production. *Applied Linguistics, 16*(3), 307-322.

Lougheed, L. (2004). *How to prepare for the TOEFL essay: Test of English as a foriegn language* (2nd ed.). NewYork: Barron's Educational Series.

Lu, X. (2012). The relationship of lexical richness to the quality of ESL learners' oral narratives. *The Modern Language Journal, 96*(2), 190-208.

Maghsoudi, M., & Haririan, J. (2013). The impact of brainstorming strategies on Iranian EFL learners' writing skill regarding their social class status. *International Journal of Language and Linguistics,1*(1), 60-67.

Majid, D., Tan, A., & Soh, K. (2003). Enhancing children's creativity: An exploratory study on using the internet and SCAMPER as creative writing tools. *The Korean Journal of Thinking and Problem Solving, 13*(2), 67-81.

Manouchehry, A., Farangi, M., Fatemi, M., & Qaviketf, F. (2014). The effect of two brainstorming strategies on the improvement of Iranian intermediate EFL learner's writing skill. *International Journal of Language Learning and Applied Linguistics World (IJLLALW), 6*(4), 176-187.

McLeod, J. & Cropley, A. (1989). *Fostering Academic Excellence*. Frankfurt, German: Pergamon Press.

McNamara, D. S, Crossley, S., & McCarthy, P. M. (2010). Linguistic features of writing quality. *Written Communication, 27*(1), 5-86.

Mowat, A. M. (2011). *Brilliant activities for stretching gifted and talented children*. United Kingdom: Teaching Solutions.

Muncie, J. (2002). Process writing and vocabulary development: Comparing lexical frequency profiles across drafts. *System, 30*, 225-235.

Otto, I. (1998). The relationship between individual differences in learner creativity and language learning success. *TESOL Quarterly, 32*(4), 763-773.

Pishghadam, R., & Javdan Mehr, F. (2011). Learner creativity and performance in written narrative tasks. *World Journal of Education, 1*(2), 115-125.

Pishghadam, R., Khodadady, E., & Zabihi, R. (2011). Learner creativity in foriegn language achievement. *European Journal of Educational Studies, 3*(3), 465-472.

Rao, Z. (2007). Training in brainstorming and developing writing skills. *ELT Journal, 61*(2), 100-106.

Read, J. (2000). *Assessing vocabulary.* Cambridge: Cambridge University Press.

Smith, M. C. (2006). *Including the gifted and talented: Making inclusion work for more gifted and able learners.* London & NewYork: Routledge.

Szerencsi, K. (2010). The need for linguistic creativity in foreign language classroom discourse. *Acta Universitatis Sapientiae, Philologica, 2*(2), 286–298.

Takahashi, M. (2007). The Japanese creativity education and creativity techniques: A perspective from the enterprise. In A. Tan (Ed.), *Creativity: A handbook for teachers.* (pp. 327-342). Singapore: World Scientific.

Tin, T. B. (2013). Towards creativity in ELT: The need to say something new. *ELT Journal, 67*(4), 385–397.

VanGundy, A. (2005). *101 activities for teaching creativity and problem solving.* San Francisco: Pfeiffer, A Wiley Imprint.

A Contrastive Study of Correction Strategies in Persian and English

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ABSTRACT

Despite the great number of interlanguage pragmatic (ILP) studies on different speech acts, only a few studies have been conducted on the correction speech act and its production strategies. Thus, the main purpose of this study is to discover Persian speakers' corrective strategies. It also aims at comparing and contrasting Persian correction strategies with those employed by native English speakers. To these ends, 50 Iranian university students were randomly selected to complete a *Discourse Completion Task* (DCT) questionnaire in Persian. Twenty native English speakers were also requested to complete the same DCT questionnaire in English. The findings reveal that corrective strategies in Persian and English are formulaic in pragmatic structures. Besides some similarities between the ways of correcting in the two languages, there are also some distinctions, such as criticising and using ironic expressions and threatening the correctee, strategies used by Persian participants and correcting through compliments, a strategy that is used only by native speakers. Moreover, both Persian participants and native English speakers used more direct strategies than indirect ones. This can be attributed to the differences between cultures, interlocutors' positions and gender. This study has implications for language researchers, Iranian EFL teachers, test designers and material developers.

Keywords: Correction realisation, correction strategy, Interlanguage Pragmatics (ILP), native Persian speakers, speech act

INTRODUCTION

Knowledge of text organisation, grammar and pragmatics of a language is necessary for successful communication, as Aribi (2012) stated. As Aribi mentioned, Austin (1962) defined speech acts as actions performed by saying something. According to Farnia and Raja Rozina (2009, pp. 110–111), in Austin's theory, "these functional units in communication have propositional or locutionary meaning (the literal meaning of the utterance), illocutionary meaning (the social function of the utterance), and perlocutionary force (the effect produced by the utterance in a given context)."

According to Norrick (1991), correction could be found in every conversation when speakers pronounced a word or use names incorrectly and felt confused. In such situations, a second speaker could correct or clarify the confusion and continued the conversation in the correct way. This study focused mainly on conversational exchanges in which a participant corrects what was said in a conversation.

Since Takahashi and Beebe (1993), and Dogancay-Aktuna and Kamisli (1995)'s earliest reports on correction speech acts and their realisation in English and Turkish, the use of corrective strategies has had a significant impact on teachers, material developers and curriculum designers. The present research is significant in providing a different way to examine the correction speech act in terms of the strategies used in Persian and English, and how these strategies may be similar or different in these two languages.

However, the studies to date have tended to focus on different kinds of speech acts in English, such as Cels (2017); Jassim and Nimehchisalem (2016); Lutzky and Kehoe (2016); Su (2017); Tabar and Malek (2013), and Weatherall and Edmonds (2018). Likewise, in Persian, many speech act studies have been done such as apology (Afghari, 2007; Shariati & Chamani, 2010) and request (Eslamirasekh, 1993; Jalilifar, 2009; Tabar & Malek, 2013). Comparatively, some researchers studied the correction speech act and its strategies in several other languages like Chinese (Gao & Liu, 2009), Vietnamese (Tran, 2011), Turkish (Dogancay-Aktuna & Kamisli, 1995) and English and Japanese (Takahashi & Beebe, 1993), but few studies can be found on correction speech acts in Persian. To this end, this study tries to fill in the gap. Therefore, the purposes of this study were to investigate correction speech acts and corrective strategies used by Persian speakers and compared the strategies with those of native English speakers.

LITERATURE REVIEW

Interlanguage Pragmatics

Kasper and Blum-Kulka (1993, p. 3) defined interlanguage pragmatics as "the study of non-native speakers' use and acquisition of linguistic action patterns in a second language (L2)." It studies how a non-native speaker comprehends and performs linguistic actions in a target language, and how they obtain L2 pragmatic awareness. As ILP implies, it is an interdisciplinary

field that includes both second language acquisition research and pragmatics simultaneously.

Speech Act

The concept of a speech act is defined as "the set of words which are used by speakers to convey their communicative functions" (Searle & Vanderveken, 1985, p. 110). One of the outstanding researchers in speech act studies is Austin. He classified peoples' utterances into three sub-categories: locutionary act, illocutionary act and perlocutionary act. The first refers to the dictionary meaning of the utterance, while the second deals with the performance that was carried out based on the understanding of the interlocutor's utterance. In fact, they refer to the conventionalised messages conveyed by a speaker. The third concept refers to the possible effect of utterances (Tsuo-lin, 2009).

Austin's speech act theory was further developed by Searle, who classified it into two sub-categories: direct and indirect speech act. As cited by Tran (2011, p. 88): "According to Saville-Troike (p. 36), "Direct acts are those where surface form matches interactional function, as "Be quiet!" used as a command, versus an indirect 'It's getting noisy here' or 'I can't hear myself think'." The indirect speech act is expressed more politely than the direct speech act.

The researches to date have tended to focus on different kinds of speech acts in English such as Cels (2017); Jassim and Nimehchisalem (2016); Lutzky and Kehoe (2016); Su (2017); Tabar and Malek (2013)

and Weatherall and Edmonds (2018). Similarly, many speech act studies have been done specifically in Persian such as the apology (Afghari, 2007; Shariati & Chamani, 2010) and request (Eslamirasekh, 1993; Jalilifar, 2009; Tabar & Malek, 2013). For example, in his research study, Afghari (2007) tried to categorise the apology strategies in Persian. Data were collected from 100 students through a DCT. He found that Persian apologies were pragmatically structured and two variables of social dominance and social distance had a significant influence on the frequency of the use of that strategy.

Correction

The speech act of correction occurs when a speaker directly or indirectly corrects the addressee's speech. A correction is a face-threatening act to the listener/interlocutor because it opposes his or her statement. Thus, the proper performance of correction demands a high level of pragmatic competence. The direct corrective strategy refers to the utterance of actual correction expressions such as "No" or "You're wrong." Indirect corrective strategies refer to the strategies speakers employ to mitigate the illocutionary force of their corrections and to reduce the offence to the interlocutor such as expressing sorrow, offering an apology or giving a suggestion. Most of the studies in the area of correction were conducted on corrective feedback, especially in the field of second language teaching.

Among these studies, we can refer to a research done by Pishghadam and Norouz (2011). The main purpose of this study was to investigate the ways Iranian EFL learners correct their teacher when their teacher made a mistake in class. In this study, 180 learners were required to fill out a questionnaire. The questionnaire contains a situation in which a mistake was committed by the teacher. Learners were required to choose among six options available on how they would correct their teacher. The results of this study revealed that the EFL learners preferred to correct their teacher implicitly rather than explicitly. They also employed positive remarks such as softeners to reduce the harsh tone of the correcting. Moreover, it was approved that the participants' age, gender and level of proficiency did not have a significant effect on the way they corrected their teacher.

To our knowledge, the first study in the realm of correction in which correction was analysed cross-culturally was conducted by Takahashi and Beebe (1993). 55 subjects completed a DCT. They analysed their data considering semantic formulas such as positive remarks and softeners. Takahashi and Beebe (1993) clarified the two notions that were eloquently explained by Darweesh and Mehdi (2016, p. 131). Positive remarks include "praise, compliment and positive evaluation. Grammatically speaking, a positive remark is a 'preceding adjunct which is phrasal and separate from the main body' (e.g. it was a good presentation, but…). Softeners are down-toners integrated in the main body of speech act" (e.g. I

think, I believe, you may have…). Both are used in order to make each speech act less face-threatening. The purpose of Takahashi and Beebe's study was to investigate the corrective performance of American and Japanese speakers of unequal power status and to explore the effect of Japanese upon English through DCT. They found that in the first situation (higher to lower status), American native speakers used more positive remarks and softeners compared with Japanese native speakers and the Japanese who spoke English used more positive remarks and softeners than Japanese native speakers. However, in the second situation (lower to higher status), the phenomenon was completely changed. The Japanese speakers tended to use a more authoritative tone and to be more direct in correcting compared with their American counterparts; this might result from their lack of interest to interact verbally.

In 1995, Dogancay-Aktuna and Kamisli conducted research into the corrective strategies of Turkish native speakers. The participants of the study were 80 Turkish native speakers who were asked to take part in role-playing activities that contained situations in which a mistake was made by one interlocutor. The aims of this study were to investigate the semantic and syntactic formulas used by Turkish native speakers and to explore the politeness devices utilised to soften the speech act of correction. Furthermore, the correction behaviour of Turkish native speakers was compared with their American counterparts in terms of the use of politeness strategies. This

study revealed that positive prefaces were considered a significant part of the semantic formulas of American speakers' correction but they did not constitute a frequent part of Turkish speakers' correction, and higher status Turks were more polite in correcting than lower status ones, though not as polite as the American speakers.

In an extension of studies on culture and correction speech acts, a contrastive analysis was carried out by Tran (2011). In this study, the corrective behaviour of three groups (English native speakers, Vietnamese natives and Vietnamese EFL learners) was compared and contrasted to find similarities and differences between the corrective performance of the Vietnamese and English speakers. The research investigated the effect of Vietnamese upon English as a foreign language. The data for the study were collected through a metapragmatic questionnaire (MPQ) and the discourse completion task (DCT) questionnaire. The MPQ consisted of 12 situations and the informants were required to answer if they would perform correction or not by choosing from among five items ranging from the most advisable to the least advisable. The results, which were gathered through MPQ, showed that English and Vietnamese speakers' cultures had more in common by considering the advisability for correcting. In the other phase, the result of the DCT questionnaire indicated that English native speakers employed more politeness strategies (like questioning and hedging) to soften the impact of a potentially face-threatening speech act than their Vietnamese counterparts. Moreover, Vietnamese EFL learners utilised more politeness strategies to make their correction as less face-threatening as possible compared with their Vietnamese counterparts. The study confirmed such pragmatic transfer influence.

After reviewing the results of the previous studies conducted on the speech act of correction and its strategies, it was revealed that there were cross-cultural differences in the performance of correction acts and there was a lack of adequate works on this subject. It should also be noted that in the literature, few studies had been done on the way Persian speakers performed correction. Therefore, the present contrastive analysis study set out to investigate the ways in which Persian and English speakers correct their addressees in their conversations.

The present study was intended to answer the following research questions:

1. What types of corrective strategy are used by English and Persian native speakers?

2. What are the similarities and differences between the corrective strategies used by Persian and English native speakers?

METHODS

Participants

Native Persian Speakers. Forty female and 10 male B.A. and M.A. students from a public university in Tehran, all studying

different majors of the humanities, were randomly selected based on convenience sampling to participate in this study.

Native English Speakers. Twenty native English speakers voluntarily participated in this study through the http://www. linguistlist.org website. They included five male and 15 female participants. In terms of their educational qualification, one participant had an associate degree, eight had a first degree in the Arts or the Sciences (B.A./B.Sc.) and 12 had a second degree in the Arts or the Sciences (M.A./M.Sc.)

Instrumentation

The instruments used for data collection in this study were two discourse completion tasks (DCT). An English DCT was adopted from Tran (2011); these encompassed items 1 to 6. Five other items were added by the researchers in order to achieve a similar status in relationship as used in items 1 to 6 and to enhance the reliability of the DCT. These items were situations that are different in social status and social distance (Tran, 2011). In addition, a Persian version of the DCT was used to elicit corrective strategies of the Persian language. The Persian version was back-translated and an expert advisor double-checked it for the accuracy of the DCT used. In order to be sure about the participants' answers to the Persian DCT, the English version was translated into Persian. First, the English version was given to two expert translators to translate into Persian, and then, two other experts were asked to translate the Persian version into English,

and this English version was compared with the original English DCT by two other experts. Finally, the Persian version, which was the most appropriately translated version, was selected as the Persian DCT to be used in the current research.

Moreover, 10 experts checked the content validity of the DCT using Lawshe's (1975) methods of content validity ratio (CVR) and content validity index (CVI). The results showed that four added items needed to be discarded. Only one item, situation seven, was added to Tran (2011)'s DCT. This was a situation between speakers of the same status. Consequently, the DCT was piloted by 20 participants with a profile similar to the target participants.

Data Collection and Analysis

This is an investigation of English and Persian strategies used for correction and their realisation. In order to collect data for the analysis, two DCTs were employed. The participants of this study were asked to complete the seven given situations, which were carefully selected regarding their differences in social status and distance. The DCT were planned to elicit linguistic data for the analysis and discovery of what corrective strategies were used in the given situations.

RESULTS

After collecting the answers, all data were analysed and tabulated in order to answer the following research questions:

Research Question 1: What Types of Corrective Strategy are Used by English and Persian Native Speakers?

After collecting the English version DCT, the answers were grouped into direct and indirect corrective strategies. Twenty native English speakers used 15 correction categories, six direct correction and nine indirect correction categories in their responses, as shown in Tables 1 and 2. On the other hand, Persian native speakers, who answered the Persian version of the DCT, used 17 correction categories, seven direct correction categories and 10 indirect correction categories in their responses, as seen in Tables 3 and 4. These corrective strategies were derived from other speech acts strategies, such as Beebe, Takahashi and Uliss-Weltz (1990)'s refusal speech act, Dogancay-Aktuna and Kamisli (1995) and by the researchers, which cannot be found in any other speech acts. The added strategies were reached after consultation with an expert adviser.

Comparatively, native English and Persian speakers did not employ some strategies. Native English speakers did not use the strategies of giving a suggestion, reasoning, criticising, using ironic expressions and threatening the correctee as did the native Persian speakers. On the other hand, native Persian speakers did not make use of the strategy of correcting through compliments, which was used by some native English speakers.

As the collected data revealed, native English speakers used both direct and indirect corrective strategies and had some examples in their answers in order to realise these classifications, as can be seen in Tables 1 and 2.

Table 1

Classification of native English speakers' direct corrective strategies and their examples

Classification of Direct Correction	Examples
1) Corrector's reference to his /her knowledge	As I know, she is Canadian.
2) Providing the right answer	She is Canadian.
3) Explicit correction	
3.1) Rejecting the correctee's response/ statement	She is not.
3.2) Finding fault with correctee	I noticed that someone made a mistake and put the wrong country here - I noticed that the origin on the report states China when it was actually originated in Japan.
3.3) Deemphasising correctee's fault: Passive structure	An error was found.
3.4) Requesting correction	Would you please correct the founding date?
4) No	No
5) Expressing certainty	I'm pretty sure it was made in the USA.
6) Expressing uncertainty	I think she is Canadian, but I could be wrong. I might be wrong, but I think the product is manufactured in Japan.

Table 2

Classification of native English speakers' indirect corrective strategies and their examples

Classification of Indirect Correction	Examples
1) Ensuring	Do you know this for sure? – What company are you thinking of?
2) Giving a suggestion	Let's check it – Let's google it.
3) Offering an apology	Sorry.
4)Thanking	Thanks.
5) Silence	
6) Finding fault with other(s)	People often mistake us.
7) Requesting (more attention)	Would you please resend it to me? Send me the corrected version when you have finished.
8) Correcting through compliment	Everything looks good except for this date. Nice work on the summary. It sounds like you know a lot about this event.

Before moving on to the findings, some clarifications are needed regarding the direct and indirect strategies:

Finding fault with correctee: This category refers to the situations in which the corrector tries to correct the correctee and directly lays blame on the correctee.

Finding fault with other(s): This category refers to the situations in which the corrector tries to correct the correctee indirectly and accuses other(s) to justify the mistake.

Comparatively, as can be seen in Tables 3 and 4, the native Persian speakers used both direct and indirect corrective strategies and had some examples in their answers that realised these classifications.

Table 3

Classification of native Persian speakers' direct corrective strategies and their examples

Classification of Direct Correction	Examples
1) Corrector's reference to his/her knowledge	تا جاییکه من از این شخص شناخت دارم میدونم که کانادائیه
2) Providing the right answer	محصول ساخت ژاپنه نه چین ـ تاریخ این واقعه فلان روز است
3) Explicit correction	
3.1) Rejecting the correctee's response/ statement	آمریکایی نیست ـ شعر مال این شاعر نیست.
3.2) Finding fault with correctee	اشتباه میکنی ـ شما اشتباه میکنی
3.3) Giving a suggestion	بهتر نیست قبلش اینو درست کنیم ـ اگه اجازه بفرمایید تصحیح کنم
3.4) Deemphasising correctee's fault: Passive structure	در این گزارش، تاریخ تاسیس اشتباه نوشته شده ـ محل تولید اشتباه زده شده
3.5) Requesting correction	تاریخ رو تصحیح کنید ـ اصلاحش می کنید؟
4) Reasoning	اگر آمریکایی بود که فرانسوی نمی خوند ـ تو سایت بیوگرافیش نوشته بود که فرانسویه
5) No	نه ـ خیر
6) Expressing certainty	من مطمئنم که اون کانادائیه ـ مطمئنم
7) Expressing uncertainty	فکر میکنم اشتباه میکنی ـ گمونم برای فلان شاعر باشه

Classification of Persian direct correction and their examples:

1) Corrector's reference to his/her knowledge

> *Ta jai ke man midoonam Amrikaie.*
>
> As far as I know American (As far as I know, she is American.)

2) Providing the right answer

> *Mahsool sakhte japone, na chin.*
> Product made Japan, not China (It was made in Japan, not China.)

3.1) Rejecting the correctee's response/statement

> *Amrikai nist.*
> American not (It is not American.)

3.2) Finding fault with correctee

> *Shoma eshtebah mikoni.*
> You wrong are (You are wrong.)

3.3) Giving a suggestion

> *Age ejaze befarmaid tashih konam*
> If let you correct I (Let me correct it.)

3.4) Deemphasising correctee's fault: Passive structure

> *Mahale tolid eshtebah neveshte shode*
> Origin wrong written (The origin of the product is wrongly written.)

3.5) Requesting correction

> *Eslahesh mikonid?*
> Correct it will you? (Will you correct it?)

4) Reasoning

> *Too biogerafish neveshte bood kanadaie.*
> In biography her written was Canadian (According to her biography, she is Canadian.)

5) No

> *Kheir* (No)

6) Expressing certainty

> *Motmaennam kanadaie*
> Sure I Canadian (I'm sure, she is Canadian.)

7) Expressing uncertainty

> *Fekr mikonam eshtebah mikoni.*
> Think I wrong you (I think you are wrong.)

Table 4
Classification of native Persian speakers' indirect corrective strategies and their examples

Classification of Indirect Correction	Examples
1) Ensuring	مطمئنی ؟ ـ کی میگه مال انگلیسه ـ مطمئنی تاریخ همینه هست که گفتی؟
2) Criticising and using ironic expressions	خواهشا مطمئن نیستی چیزی نگو ـ تاریخ به این مهمی رو نباید اشتباه بگی
3) Giving a suggestion	بهتره بیشتر مطالعه کنی ـ دوباره اگه وقت دارید متن رو بخوانید
4) Offering an apology	عذر میخوام ـالبته شرمنده کلامتون رو قطع میکنم
5)Thanking	ممنونم ـ شرمنده
6) Silence	
7) Finding fault with other(s)	البته می دونم تاریخ برخی رویدادها قاطی میشن
8) Requesting (more attention)	دوباره بنویسید ـ یه مقدار تامل کنید و جواب بدهید
9) Threatening the correctee	تکرار نشه ـ بار آخرتان باشه ـ حرف نباشه من دارم بهت میگم

Classification of Persian indirect correction and their examples:

1) Ensuring

Motmaenni?

Sure you? (Are you sure?)

2) Criticising and using ironic expressions

Khaheshan motmaen nisti chizi nagoo!

Please sure not nothing say (Please don't say anything if you are not sure!)

3) Giving a suggestion

Behtare bishtar motale koni!

Should more read! (You should read more!)

4) Offering an apology

Ozr mikham. (I am sorry.)

5) Thanking

Mamnoon (Thanks.)

7) Finding fault with other(s)

Midoonam tarikhe bazi chiza ghati mishe.

Know I date something mistaken. (I know some dates can be mistaken.)

8) Requesting (more attention)

Lotfan dobare Benevisid.

Please again write you (Please write it again.)

9) Threatening the correctee

Dige tekrar nashe!

Again repeat don't (Never do it again.)

Research Question 2: What are the Similarities and Differences between the Corrective Strategies Used by Persian and English Native Speakers?

The frequency of use of each direct and indirect strategy was calculated and the percentage for both languages was tabulated. Table 5 and Figure1 provide details of the

Table 5

Percentage of each classification of direct corrective strategies in English and Persian languages

Classification	Percentage in English (%)	Percentage in Persian (%)
1) Corrector's reference to his/her knowledge	1.63	4.23
2) Providing the right answer	25.71	23.11
3) Explicit correction		
3.1) Rejecting the correctee's response/statement	3.67	4.33
3.2) Finding fault with correctee	2.85	7.18
3.3) Giving a suggestion	0	1.52
3.4) Deemphasising correctee's fault: Passive structure	1.63	7.16
3.5) Requesting correction	2.85	5.31
4) Reasoning	0	2.03
5) No	6.53	5.49
6) Expressing certainty	2.44	1.98
7) Expressing uncertainty	17.95	7.83
Sum	**65.3**	**70.17**

percentage of use of each direct strategy; about 65.3% of the responses of the native English participants and 70.17% of those of the native Persian participants used direct corrective strategies.
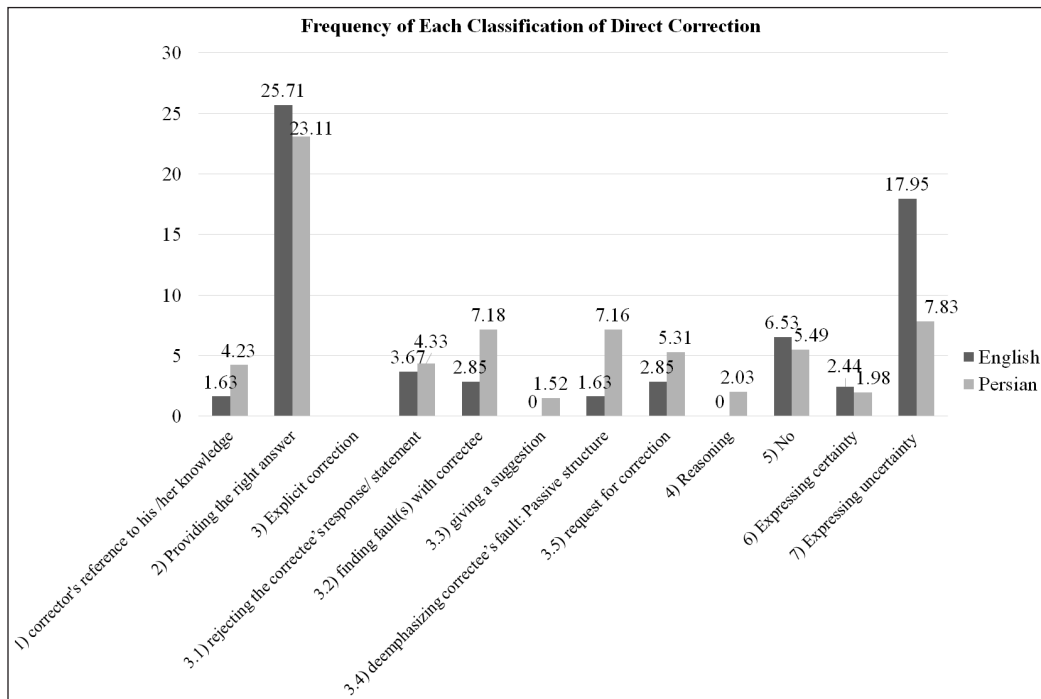

Figure 1. Frequency of each classification of direct corrective strategies in English and Persian languages

Table 6 and Figure 2 show that the native English participants used the indirect corrective strategy in 34.7% of their responses, while the native Persian participants used it in 29.83% of their responses.

By comparing the responses, some similarities could be found in the use of both direct and indirect corrective strategies of English and Persian languages. In the use of direct corrective strategies, both languages are somehow similar in the use of five corrective strategies: 1. Right answer, 2. Rejecting the correctee's response/statement, 3. Requesting correction, 4. No, and 5. Expressing certainty. With indirect corrective strategies of the two languages, five similar strategies were used: 1. Giving a suggestion, 2. Offering an Apology, 3.Thanking, 4. Silence, and 5. Finding fault with others.

Besides these similarities, there were some differences between the two languages: six direct corrective strategies: 1. Corrector's reference to his/her background knowledge, 2. Finding fault with correctee, 3. Giving a

Table 6
Frequency of each classification of indirect corrective strategies in English and Persian languages

| Classification	Percentage in English (%)	Percentage in Persian (%)
1) Ensuring	12.65	2.41
2) Criticising and using ironic expressions	0	8.42
3) Giving a suggestion	4.04	3.13
4) Offering an apology	6.93	6.77
5)Thanking	1.63	0.62
6) Silence	2.04	2.8
7) Finding fault with other(s)	0.4	0.62
8) Requesting (more attention)	1.63	3.75
9) Threatening the correctee	0	1.33
10) Correcting through compliment	5.31	0
Sum	**34.7**	**29.83**
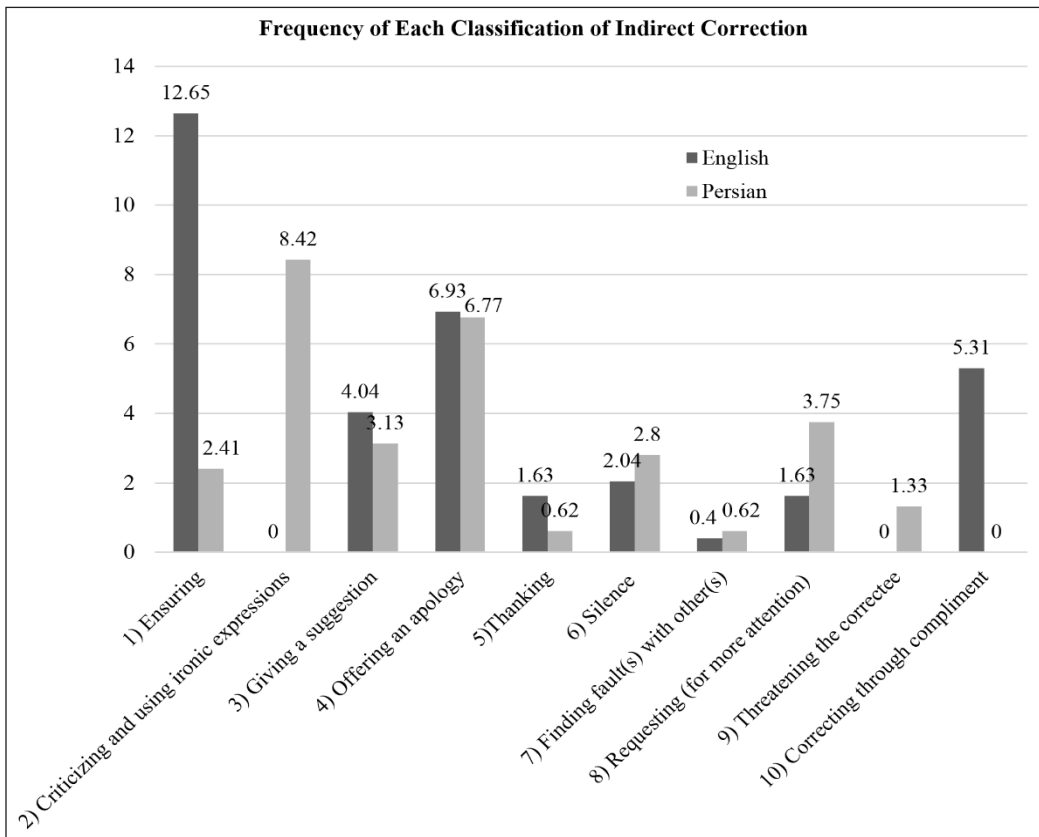
Figure 2. Frequency of each classification of indirect corrective strategies in English and Persian languages

suggestion, 4. Deemphasising correctee's fault: Passive structure, 5. Reasoning, and 6. Expressing uncertainty, and five indirect corrective strategies: 1. Questioning for assurance, 2. Criticising and using ironic expressions, 3. Requesting (more attention), 4. Threatening the correctee, and 5. Correcting through compliment.

Some corrective strategies were not used in both languages. Four corrective strategies used by native Persian speakers were not used by native English speakers: 1. Giving a suggestion, 2. Reasoning, 3. Criticising and using ironic expressions, and 4. Threatening the correctee. On the other hand, native Persian speakers did not report the correcting through compliment strategy in their responses, but this strategy can be seen in native English speakers' answers.

The responses show that directly providing the right answer was the most frequent strategy (25.7%) and indirectly finding fault with other(s) (0.4%) was the least frequent strategy used by native English speakers. In contrast, directly providing the right answer was the most frequently used strategy (23.11%), while indirectly thanking and finding fault with other(s) (both 0.62%) were the least frequently used strategies by native Persian speakers.

As Tables 5 and 6 display, both native English and Persian speakers preferred to use direct corrective strategies rather than indirect corrective strategies. About 65.3% of the responses of native English speakers used corrective strategies and 34.7% used indirect strategies, while comparatively, 70.17% of the responses of native Persian speakers used direct and 29.83% percent of their responses used indirect corrective strategies. These results revealed that native Persian speakers' answers were more direct than those of native English speakers.

DISCUSSION

The aims of this study were to investigate correction speech acts and the strategies used by Persian speakers in comparison with the strategies used by native English speakers in their speech acts. Fourteen corrective strategies were reached after collecting and analysing the English version DCTs. Corrective strategies and the realisations that native English speakers used in their correction can be found in Tables 1 and 2. Comparatively, there were also 16 Persian language corrective strategies and their realisations, as shown in Tables 3 and 4.

As the tables reveal, some similarities appeared in both languages, which means that these concepts may be parallel in both cultures. Besides the observed similarities and differences between the corrective strategies used in both languages as shown in Tables 1, 2, 3 and 4, there were four strategies that were not used by native English speakers: 1. Giving a suggestion, 2. Reasoning, 3. Criticising and using ironic expressions, and 4. Threatening the correctee, and one strategy by native Persian speakers: correcting through compliment strategy.

The findings are in line with that of Takahashi and Beebe (1993). They reported that direct corrective strategies were used more than indirect ones by English speakers.

It confirmed that both native English and Persian speakers preferred correcting directly. This may be the influence of gender on the responses. However, the results contradict Lakoff's assertion (1973) that women use more hedges and tag questions i.e. indirect ways of speaking. According to Lakoff, "hedge mitigates the possible unfriendliness or unkindness of a statement" (p. 54). She added that women use more tags "because they are socialized to believe that asserting themselves strongly isn't nice or ladylike, or even feminine" (p. 54).

On the other hand, the findings are in line with Darweesh and Mehdi (2016)'s study of corrective strategies used by Iraqi EFL students. They showed that Iraqi students employed direct strategies more than indirect ones because of their personality or cultural features. They also reported the silence strategy used in some situations. They believed that the reason was that the participants "have the spirit of accomplishing the act and they are not shy to remain silent" (2016, p. 138). It can be presumed that the similarity between the findings could have been caused by some possible cultural similarities between the participants of the two studies. For instance, both countries pursue the same religion (Islam) and their spoken languages have many similarities (Persian and Arabic).

However, as the data revealed, the strategy of providing the right answer has a significantly higher proportion of usage, which is in line with Tran's (2011) findings. This may be due to two possible universal truths:

1. There is a preference for direct strategies as opposed to more indirect strategies.

2. Most competent adult members of society are expected to provide right answers immediately.

Nevertheless, the presence of strategies such as criticising and using ironic expressions or threatening the correctee, mostly reported among Persian native speakers, might be due to two reasons i.e. the way native Persian speakers treat faults of those deemed of lower status and the situational and status differences of interlocutors or the Islamic nature of Iran, where women employ conflictive and confrontational strategies that have the most impolite intention, mostly when and where the addressee is of the same sex (Parvaresh & Eslamirasekh, 2009).

The significance of the present research is that it provides a different way to examine correction speech acts in terms of strategies used in Persian and English, and how these strategies may be similar or different in these two languages. These strategies have a significant impact on teachers, material designers, curriculum developers and syllabus designers, all of whom are responsible for enhancing teaching materials at any levels.

CONCLUSION

The purpose of the current study was to determine corrective strategies used in the Persian language and to find out the similarities and differences between the

corrective strategies used in English and Persian. In summary, correction speech acts in Persian and English are formulaic in their pragmatic structure. This means that both direct and indirect corrective strategies are prefabricated, routinised expressions that include what speakers and language learners internalise as they develop pragmatically (Pawley & Syder, 1983). These formulas can be used over and over with no need of variation and elaboration. In addition, both native speaking Persian and English participants used more direct strategies than indirect ones; also, there were some corrective strategies used only by the Persian-speaking participants and not by the English-speaking ones and vice versa.

However, far too little attention has been paid to the correction speech act and its strategies in Persian and how it may be different from similar strategies of the English language. The use of corrective strategies has a significant impact on teachers, material developers and curriculum designers. Materials for teaching pragmatics should be based on the analysis of the social and cultural differences of both L1 and L2, which explains the performance of non-native speakers when using their target language knowledge. Awareness of the pre-established norms would aid teachers and instructors of English as a foreign language and Persian as a foreign language in knowing what is pragmatically proper in a given situation and would provide English and Persian learners with corrective feedback.

It is suggested that further studies be done on corrective speech acts in order to investigate the reasons behind these findings and to investigate the influence of gender on the use of corrective strategies used in both the English and Persian languages.

REFERENCES

Afghari, A. (2007). A sociopragmatic study of apology speech act realization patterns in Persian. *Speech Communication*, *49*(3), 177–185.

Aribi, I. (2012). A socio-pragmatic study of the use of requests in English by Tunisian EFL learners. *Journal of Second Language Teaching & Research, 2*(1), 87–120.

Austin, J. L. (1962). *How to do things with words*. Oxford: Oxford University Press.

Beebe, L. M., Takahashi, T., & Uliss-Weltz, R. (1990). Pragmatic transfer in ESL refusals. In R. C. Scarcelle, E. Anderson, & S. C. Krashen (Eds.), *Developing communicative competence in a second language* (pp. 55–73). New York: Newbury House.

Cels, S. (2017). Saying sorry: Ethical leadership and the act of public apology. *The Leadership Quarterly*, *28*(6), 759–779.

Darweesh, A. D., & Mehdi, W. S. (2016). Investigating the speech act of correction in Iraqi EFL context. *Journal of Education and Practice*, *7*(7), 127–139.

Dogancay-Aktuna, S., & Kamisli, S. (1995). Corrections in Turkish: Sociolinguistic analysis and cross-cultural comparison. *29th Annual Convention and Exposition of Teachers of Speakers of Other Languages (TESOL)*, Long Beach California, USA.

Eslamirasekh, Z. (1993). A cross-cultural comparison of requestive speech act realization patterns in Persian and American English. *Pragmatics*

and Language Learning Monograph Series, *4*, 85–103.

Farnia, M., & Raja Rozina R. S. (2009). An interlanguage pragmatic study of expressions of gratitude by Iranian EFL learners: A pilot study. *Malaysian Journal of ELT Research*, *5*, 108–140.

Gao, Q., & Liu, Sh. (2009). Chinese EFL learners' correcting strategies in classroom interaction. *US-China Foreign Language*, *7*(3), 34–51.

Jalilifar, A. (2009). Request strategies: Cross-sectional study of Iranian EFL learners and Australian native speakers. *English Language Teaching*, *2*(1), 46–61.

Jassim, A. H., & Nimehchisalem, V. (2016). EFL Arab students' apology strategies in relation to formality and informality of the context. *Ampersand*, *3*, 117–125.

Kasper, G., & Blum-Kulka, S. (Eds.). (1993). *Interlanguage pragmatics*. Oxford: Oxford University Press.

Lakoff, R. (1973). *Language and woman's place. Language in Society*, *2*(1), 45–80.

Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel psychology*, *28*(4), 563–575.

Lutzky, U., & Kehoe, A. (2016). "Oops, I didn't mean to be so flippant." A corpus pragmatic analysis of apologies in blog data. *Journal of Pragmatics*, *116*, 27–36.

Norrick, N. R. (1991). On the organization of corrective exchanges in conversation. *Journal of Pragmatics*, *16*(1), 59–83.

Parvaresh, V., & Eslami Rasekh, A. (2009). Speech act disagreement among young women in Iran. *CLCWeb: Comparative Literature and Culture*, *11*(4), 2–8.

Pawley, A., & Syder, F. H. (1983). Two puzzles for linguistic theory: Nativelike selection and nativelike fluency. In J. C. Richards & R. W. Schmidt (Eds.), *Language and communication* (pp. 191–225). London and New York: Longman.

Pishghadam, R., & Norouz Kermanshahi, P. (2011). Speech act of correction: The way Iranian EFL learners correct their teachers. *Theory and Practice in Language Studies*, *1*(4), 342–348.

Searle, J., & Vanderveken, D. (1985). *Foundations of illocutionary logic*. Cambridge: Cambridge University Press.

Shariati, M., & Chamani, F. (2010). Apology strategies in Persian. *Journal of Pragmatics*, *42*(6), 1689–1699.

Su, H. (2017). Local grammars of speech acts: An exploratory study. *Journal of Pragmatics*, *111*, 72–83.

Tabar, M. S., & Malek, L. A. (2013). Delving into speech act of requests of Iranian Turkish informants. *Procedia-Social and Behavioral Sciences*, *70*, 1724–1731.

Takahashi, T. & Beebe, L. (1993).Cross-linguistic influence in the speech act of correction. In G. Kasper & Sh. Blum-Kulka (Eds.), *Interlanguage Pragmatics*. (pp. 138–157). Oxford: Oxford University Press.

Tran, T. M. H. (2011). *The speech act of correction on English and Vietnamese: an interlanguage pragmatics study* (Doctoral dissertation). College of Foreign Languages, University of Danang, Vietnam.

Weatherall, A., & Edmonds, D. M. (2018). Speakers formulating their talk as interruptive. *Journal of Pragmatics*, *123*, 11–23.

Human Welfare and Transmission Channel of Globalisation: Empirical Evidence from Sub-Saharan African Regions

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ABSTRACT

Rapid globalisation has translated to growth , but the resulting gains have not been reflected in qualitative welfare for most developing countries and thus, have precipitated inconclusive debates on the precise directional link between globalisation dimensions and changes in human welfare. Thus, this study examines the regional impact of the transmission channels of globalisation on human welfare in 16 Sub-Saharan African countries from 1980 to 2014. Using the panel fixed effect method, the findings reveal that trade openness enhanced human welfare development and the access of people to infrastructural facilities for the regions. FDI is found to be predominantly enhancing to human welfare in the Eastern and Southern Africa regions. Also, high labour migration and emigration of experts as a dimension of globalisation is found to worsen human welfare development and hinder basic infrastructural development in the regions, and lead to bad and ineffective governance. The study finds that the high level of social globalisation via labour inflow, access of people to telephone and Internet facilities enhanced the development of human welfare changes as evidenced in Southern Africa. Appropriate policy options are recommended to enhance human welfare development in the region.

Keywords: Basic needs, foreign capital, human welfare, information technology, labour, trade

INTRODUCTION

In spite of the controversies surrounding the impact of globalisation on human welfare, evidence points to a high incidence of poverty in the era of intensive globalisation among poor nations especially in Sub-Saharan African (SSA). People in SSA,

as well as those in South Asia, are among the poorest in the world, in terms of real income, wellbeing status and access to social services. About 48.3% of the population of SSA live in poverty, with an average life expectancy of 47 years (World Bank Report, 2011). Since the Second World War, SSA has been relatively more integrated into the world economy, with high trade/ GDP ratios (World Bank, 2006). In spite of the increasing degree of openness of the region to the global market, most of her social and human welfare indicators have recorded a downward trend (United Nations Development Programme [UNDP], 2009). If more openness stimulates growth, as pro-globalisation advocates claim, such integration should have led to greater sustained growth in the SSA region than in Latin America as well as South and East Asia. These regions have managed to lift their people out of abject poverty, deteriorating human welfare and high income inequality, which the SSA region to a large extent, has not.

This has been blamed on lack of institutional capacity, poor assets distribution, poor governance, persistence of civil strife and diseases, as well as a low technological base. All these tend to make SSA unattractive to foreign and domestic investors. In spite of the rapid changes in world trade in the past few decades, SSA is characterised by low value-added exports, especially agricultural commodities and minerals, which it exchanges for manufactured goods. The enclave nature of mineral production in the region, not only accounts for the exposure of the economies to international price fluctuations and adverse effects of technological backwardness, it is also to be blamed for her current status in the global market (United Nations Conference on Trade and Development, 2006).

The literature on the impact of globalisation on poverty and human welfare points to highly variable outcomes (positive and negative) as well as multiple causalities, channels and mechanisms that link globalisation with human welfare. On the one hand, are those who find that globalisation worsens well-being (Fosu & Mold, 2008; Milanovic & Squire, 2005; Ravallion, 2006; Wagle, 2007). On the other hand, some authors point to evidence of human welfare improvements arising from globalisation (Bhagwati & Srinivasan, 2002; Dollar & Kraay; 2004). Yet, some economists argue that there is no specific link between them (Choi, 2006; Sylvester, 2005). Thus, there is no consensus on how the integration of developing economies into the global market affects the welfare of their people. Some empirical evidence confirm the submission of this school of thought that "more open economies are more prosperous and experience faster rate of progress (Chan & Dung, 2002; Hammed & Nazir, 2009; Harrison, 2006; Maertens, Colen, & Swinnen, 2011; Neutel & Heshmati, 2006). The antagonists of globalisation argue that world poverty has been rising and human welfare deteriorating due to the forces unleashed by the same wave of globalisation

(Gold, 2009; Guordon, Maystre, & De Melo, 2008; Hammoris & Kai, 2009; Heshmati, 2003; Khor, 2002; Santarelli & Figini, 2002).

However, the gap which this study aimed to fill is the analytical aspect identified in most earlier empirical studies (Dreher, 2006; Dreher & Gaston, 2008; Dreher, Gaston, & Martens, 2008; Guordon, et al., 2008). The studies neglected country and region specifics in their econometric analysis of the impact of globalisation on poverty and human welfare. This study therefore, attempts to determine the impact (magnitude and direction) of the major components of globalisation on human welfare in SSA regions. Also, most of the studies did not use broader measures that encompass peoples' access to the basic necessities of life such as access to safe water, basic health services, basic education, sanitation, decency of life and good standard of living. Therefore, this study incorporates the identified gaps in measuring and quantifying human welfare and how it is affected by globalisation. The pertinent question raised was: To what extent does globalisation affect human welfare indices like peoples' access to the basic necessities of life such as access to safe water, basic health services, sanitation, decency of life and good standard of living in the SSA region? Are there causal connections in their relationship?

The study comprises five sections. The first section is the introduction and the second section is the literature review. The third section presents the estimable model and estimation techniques. The fourth section presents the results and ensuing discussion, while the last section concludes with some policy implications.

LITERATURE REVIEW

This study relied on the poverty of globalisation theory and the endogenous growth model. The poverty of globalisation theory is based on the claim that in recent years there has been a reduction in poverty in the global order, and that this development is a product of nation states adopting "globalisation-friendly" policies (Department for International Development, 2012; World Bank, 2002). The World Bank argues that globalisation generally reduces poverty because more integrated economies tend to grow faster and this growth is usually widely diffused. This is because a reduction in world barriers to trade could accelerate growth, provide stimulus to new forms of productivity-enhancing specialisation and lead to a more rapid pace of job creation and poverty alleviation around the world.

An endogenous growth model is one in which the long run growth rate of output per worker is determined by variables within the model, not by an exogenous rate of technological progress as is the case in a neoclassical growth model. The influential early endogenous growth models were by Lucas (1988) and Rebelo (1991); Romer (1986). The endogenous growth theory ended most of the exogenous controversies by the neoclassical economists. Romer (1986) argued that the rate of investment and rate of return on capital might increase rather than decrease with an increase in

capital stock. In Romer's model, knowledge is taken as an input in the production function and new knowledge, the ultimate determinant of long run growth, is the investment in research technology that exhibits diminishing returns. The theory suggests that a higher long run rate of growth in output can be the result of more openness, especially when technology and knowledge diffuse freely among the participating countries. The theory does not, however, predict any positive link between openness and growth; the direction of the openness-growth relationship is not theoretically given.

Empirical reviews of past studies were presented based on time series and panel data studies; likewise, different methodologies were adopted. Using the time series data, Chan and Dung (2002) examined the variation and dispersion in the consumption of imported goods between the rich and the poor in Vietnam. Employing a single calibration to data for 1997 and forward projection, the findings indicated that trade policy change was pro-rich for consumption in Vietnam. Further, the data suggested that the rich bought proportionately more imported goods than the poor. Khor (2002) investigated the trade linkage as a determinant of poverty in relation to other openness link in Bangladesh over the periods of 1985-1996. Using the double calibration method, findings revealed that trade was a minor determinant of poverty change compared to technical change and endowment growth. Siddiqui and Kemal (2002) examined the

precise determinants of poverty through globalisation and non-globalisation channels in Pakistan over the period, 1989-1990. They found that non-globalisation variables were key to poverty measures.

On their part, Hammed and Nazir (2009) assessed the impact of economic globalisation on poverty and inequality in Pakistan by focussing on trade liberalisation as an aspect of globalisation for the period of 1970 to 2004. The study employed both Granger causality and the vector error correction model (VECM) methods. The results from Granger causality pointed out that trade liberalisation played a positive role in employment generation but had a negative influence on per capita GDP. The overall results seemed to suggest that globalisation, while leading to poverty reduction, had at the same time exacerbated income inequality. More so, Hai et al. (2006) assessed the impact of globalisation and liberalisation on the growth, incidence of poverty and inequality in Pakistan from 1973 to 2003. The time series estimates carried out were unit root test, maximum likelihood test for co-integration and the error correction model. The findings showed the existence of a long-run relationship between all the variables used. Therefore, globalisation can be used as an effective means through which the issue of poverty can be addressed in Pakistan.

Maertens, Colen and Swinnen (2011) contributed to empirical literature on globalisation and poverty using household data to study the effect of what many consider 'a worst-case scenario' in

Senegal. They employed the descriptive analyses, Ordinary Least Square (OLS) and instrumental variable estimation and Probit modelling. The findings reflected a positive welfare impact of globalisation through employment creation and labour market participation. Gold (2009) addressed the linkage of globalisation and poverty in the developing countries of Bangladesh and Nigeria in the period 1985 to 2006. Using descriptive analyses, the study concluded that the pace of poverty alleviation required policies that further integrated developing countries into the global economy to enable the poor to take the new opportunities offered by globalisation.

For studies that used panel data, Santarelli and Figini (2002) investigated whether globalisation reduced or escalated poverty for selected developing countries using descriptive statistic and econometric analysis. The authors showed that financial openness, although not statistically significant, tended to be linked positively to poverty. However, trade openness tends not to significantly affect relative poverty, but financial openness does. Heshmati (2003) investigated the relationship between income inequality and globalisation in developing economies. Using multiple regression analysis, the empirical results showed that the low rank of the globalisation process was due to the political and personal factor with limited possibility for the developing countries to affect this. Thus, globalisation indices explained 7 to 11% in income inequality among the countries. Neutel and Heshmati (2006) examined the relationship between globalisation inequality and poverty from cross-country evidence for selected developing countries. They employed linear and non-linear regression analyses and found that linear regression analysis showed that the relationship between globalisation and poverty remained significant when controlled for regional heterogeneity while non-linear analysis showed that poverty had diminishing returns on globalisation.

Nonetheless, Lee and Vivarelli (2006), for some selected developing countries, examined the social impact of globalisation using descriptive analysis. Their findings indicated that the optimistic Heckscher-Ohlin/Stolper-Samuelson predictions did not apply to the selected developing countries. Employment effect could be very diverse. Also, trade seemed to foster economic growth and absolute poverty alleviation, although some important counter-examples emerge. Guordon et al. (2008) established the link between openness, inequality and poverty for selected developing countries. Using panel data analysis, it could be seen that there was consistent evidence that the conditional effects of trade liberalisation on inequality were correlated with relative factor endowment. Ligon (2006) investigated poverty and the welfare costs of risk associated with globalisation for selected developed and developing countries in 2003. Using the Quantile Lorenz curve approach, the author found that global shocks were of less importance than country-level shocks in explaining variation in consumption growth.

Harrison (2006) surveyed the evidence on the linkage between globalisation and poverty using trade and international capital flows as two basic measures of globalisation for some developed countries. The author used multiple regression analysis and concluded that the poor were more likely to share in the gains from globalisation when there were complementary policies; trade and foreign investment reforms had produced benefits for the poor in exporting sectors and the sectors that receive foreign investment; financial crises were very costly to the poor. Heinrich (2009) estimated the effect of national symbols and globalisation on the well-being of 88 selected developing countries. The study used descriptive statistics and panel regression analysis and found that conventional determinants of production affect national well-being measured as Human Development Index (HDI). The effects on HDI of national symbols were unstable while those of globalisation were strong with social globalisation having the strongest effects.

For the entire Sub-Saharan Africa (SSA) regions in the period 1980-2002, Hammoris and Kai (2009) investigated the relationship between globalisation, financial deepening and inequality. Using the panel data regression method and unbalanced panel data model, the findings show that globalisation deteriorates inequalities and its effect depends on the level of development of the country. Also, globalisation deteriorates the equalising effects of financial depth, although it later helps to reduce inequality. Similarly, Geda and Shimeless (2006) explored the relationship between openness, poverty and inequality in Africa. Using descriptive analyses, the results showed that Africa was marginalised from global markets given its degree of trade and financial integration with the rest of the world. Likewise, Adeyemi et al. (2006) examined the determinants of human development in Sub-Saharan Africa in the year 2003. Multiple regression analysis showed that factors like extent of conflicts, the occurrence of natural disaster, external debt crises, macroeconomic instability, international trade, lack of access to water and the prevalence of HIV/AIDS impacted negatively on human development in the sub-region. Also, Jeffery (2007) examined the macro evidence on the extent to which globalisation was taking place and poverty was reducing for selected countries in Africa in the period 1980 and 2004. Using the descriptive analyses, the study concluded that globalisation had generally been a gradual and indeed, a slow process in Africa relative to other global regions.

METHODS

The theoretical foundation of this study hinged on the endogenous theory of growth adapted by Maku (2015) to examine the relationship between globalisation and human welfare development in SSA countries. The study used static fixed effects to model the relationship between globalisation and human welfare development. The major advantage of this technique is that it allows for variable intercepts to represent country effects. The

general form of the fixed effects model in respect to this study, where i indicates countries and t represents time, is stated as:

$$y_{it} = \beta' x_{it} + \varphi' c_{it} + v_i + e_{it} \qquad [1]$$

where, y = human welfare development proxy by human development index (HDI), life expectancy at birth (LEI), infant mortality rate (IMR) and mean years of schooling of adults (MYS), whereas the indices of access to basic necessities were improved water (% of population with access) (WAT), improved sanitation facilities (% of population with access) (SAN) and healthcare services (% of population with access) (HCS);

x = transmission channels of globalisation such as trade (TRD), portfolio investment (PFI), foreign direct investment (FDI), labour migration (LBM) and information and communication technology (ICT) as trade openness, capital flow, technology and labour mobility transmission channels as noted by Nissanke and

Thorbecke (2008; 2010) and used in Heinrich (2009) to proxy national symbols and global interactions;

c = control variables;

v_i = the effect of variables related to the i-th country that is invariant over time. The country effects are, however, treated as fixed rather than random because the differences between countries are due to the mean of the dependent variables than to their variance;

e_{it} = stochastic term that is uncorrelated with the independent variables indicating that x_{it} is a strictly exogenous vector of variables;

β is a vector of coefficients of the vectors of independent variables x_{it}; and

φ is a vector of control variables.

The fixed effects model also allows for an intuitive interpretation of the estimation results. This model is used to estimate seven multivariate regressions following the use of seven indicators of human welfare.

$$HDI_{it} = a_{i,0} + \beta \, h \, FCF_{it} + \eta_1 \, h \, TRD_{it} + \eta_2 \, h \, PFI_{it} + \eta_3 \, h \, FDI_{it}$$
$$+ \eta_4 \, h \, LBM_{it} + \eta_5 \, h \, ICT_{it} + \eta_6 \, h \, GGI_{it} + \delta n_{it} + u_{1t} \qquad [2]$$

$$LEI_{it} = a_{i,0} + \beta \, h \, FCF_{it} + \eta_1 \, h \, TRD_{it} + \eta_2 \, h \, PFI_{it} + \eta_3 \, h \, FDI_{it}$$
$$+ \eta_4 \, h \, LBM_{it} + \eta_5 \, h \, ICT_{it} + \eta_6 \, h \, GGI_{it} + \delta n_{it} + u_{1t} \qquad [3]$$

$$IMR_{it} = a_{i,0} + \beta \, h \, FCF_{it} + \eta_1 \, h \, TRD_{it} + \eta_2 \, h \, PFI_{it} + \eta_3 \, h \, FDI_{it}$$
$$+ \eta_4 \, h \, LBM_{it} \, \eta_5 \, h \, ICT_{it} + \eta_6 \, h \, GGI_{it} + \delta n_{it} + u_{1t} \qquad [4]$$

$$MYS_{it} = a_{i,0} + \beta \, \hbar \, FCF_i + \eta_1 \, \hbar \, TRD_i + \eta_2 \, \hbar \, PFI_i + \eta_3 \, \hbar \, FDI_i$$
$$+ \eta_4 \, \hbar \, LBM_i + \eta_5 \, \hbar \, ICT_i + \eta_6 \, \hbar \, GGI_i + \delta n_i + u_{1t} \qquad [5]$$

$$WAT_{it} = a_{i,0} + \beta \, \hbar \, FCF_i + \eta_1 \, \hbar \, TRD_i + \eta_2 \, \hbar \, PFI_i + \eta_3 \, \hbar \, FDI_i$$
$$+ \eta_4 \, \hbar \, LBM_i + \eta_5 \, \hbar \, ICT_i + \eta_6 \, \hbar \, GGI_i + \delta n_i + u_{1t} \qquad [6]$$

$$SAN_{it} = a_{i,0} + \beta \, \hbar \, FCF_i + \eta_1 \, \hbar \, TRD_i + \eta_2 \, \hbar \, PFI_i + \eta_3 \, \hbar \, FDI_i$$
$$+ \eta_4 \, \hbar \, LBM_i + \eta_5 \, \hbar \, ICT_i + \eta_6 \, \hbar \, GGI_i + \delta n_i + u_{1t} \qquad [7]$$

$$HCS_{it} = a_{i,0} + \beta \, \hbar \, FCF_i + \eta_1 \, \hbar \, TRD_i + \eta_2 \, \hbar \, PFI_i + \eta_3 \, \hbar \, FDI_i$$
$$+ \eta_4 \, \hbar \, LBM_i + \eta_5 \, \hbar \, ICT_i + \eta_6 \, \hbar \, GGI_i + \delta n_i + u_{1t} \qquad [8]$$

where, HDI = human welfare development proxy by human development index;

LEI = life expectancy at birth;

IMR = infant mortality rate;

MYS = mean years of schooling of adults;

WAT = access to basic necessities were improved water (percentage of population with access);

SAN = improved sanitation facilities (% of population with access;

HCS = healthcare services (% of population with access);

FCF = fixed capital formation;

TRD = channels of globalisation such as trade;

PFI = portfolio investment;

FDI = foreign direct investment;

LBM = labour migration;

ICT = information and communication technology (ICT); and

GGI = good governance index. The specified panel regression Equation [2] to [8] is estimated for SSA on a regional basis.

The study sample size consisted of 16 SSA countries over a period of 35 years. The World Development Indicators, 2016 covering the time period of 1980-2014 were selected based on data availability. The SSA countries are Gabon, Central Africa Republic, Cameroon, Rwanda, Kenya, Tanzania, Mauritius, Tanzania, South Africa, Malawi, Botswana, Mozambique, Nigeria, Ghana, Benin and Niger.

RESULTS, DATA ANALYSIS AND INTERPRETATION

Descriptive Statistics

Table 1 shows the descriptive statistics of the variables for the regional pooled data of the four Sub-Saharan African regions.

Among the regions in the SSA, the Eastern Africa region has the highest mean of HDI, LEI and MYS, followed by Southern Africa. Southern Africa has the highest proportion of people who have access to basic necessities such as improved sanitation, water supply and healthcare services compared with other sub-regions. This reflects the huge infrastructural investment in the selected Southern African countries, Botswana, South Africa, Malawi and Mozambique. The average economically active population as a share of total population size (POP) for Central, Eastern, Southern and Western Africa (between 1980 and 2014) stood at 53.6%, 54.7%, 55.1% and 52.2%, respectively showing that Southern and Eastern Africa regions have the highest productive workforce compared with other SSA regions in this period.

The Southern Africa is the most globalised region in SSA, followed by the Eastern Africa region. The Western Africa region, which consists of Benin, Ghana, Niger and Nigeria, is the least globalised region in SSA in terms of trade flows. Also, Cameroon, Central African Republic, Gabon and Rwanda that make up Central Africa are relatively less globalised compared with Eastern and Southern Africa.

Comparatively, the regional descriptive statistics indicated that regions with the highest share of working age population (POP) also have better human welfare development and access to basic necessities, and they are more economically integrated through trade flows compared with regions with a less economically active population.

Table 1
Descriptive statistics for regional pooled data

Variables	Central Africa	Eastern Africa	Southern Africa	Western Africa	Obs.	Cross Sections
HDI	40.38	44.49	42.48	34.43	140	4
LEI	53.05	57.48	51.58	51.73	140	4
IMR	82.52	64.01	82.96	97.65	140	4
MYS	3.09	4.39	3.26	2.08	140	4
SAN	31.67	36.74	41.35	14.09	140	4
WAT	61.15	61.19	65.98	53.53	140	4
HCS	49.94	56.38	48.09	48.29	140	4
TRD	61.09	65.71	66.84	56.92	140	4
POP	53.63	54.69	55.08	52.20	140	4
FDI	1.81	-0.56	0.08	-0.12	140	4
PFI	-0.10	1.60	2.27	2.35	140	4
CFC	17.62	19.17	20.50	12.75	140	4
LBM	-0.03	-0.59	0.04	0.05	140	4
TEL	23.25	43.60	35.52	5.22	140	4
GGI	-27.47	-15.20	10.45	-29.25	140	4

Source: Authors' computation (2018)

The results further revealed that Southern Africa and Eastern Africa are more economically globalised compared with other regions. A plausible inference from the descriptive analysis is that SSA sub-regions that are more economically globalised (Southern and Eastern Africa) are less engulfed by deteriorating human welfare development and inadequate access to the basic necessities of life.

Based on the mean value of FDI-GDP ratio as a component of globalisation, Central Africa as first and then Southern Africa are the most globalised regions in SSA in terms of capital flow. The Eastern Africa region, which consists of Kenya, Mauritius, Tanzania and Uganda, is the least globalised region in SSA in terms of capital flow. Also, in terms of PFI as a share of GDP, the proxy for financial channel of globalisation, its mean average value stood at -0.10%, 1.6%, 2.27% and 2.35% for Central, Eastern, Southern and Western Africa, respectively in this period. This suggests that Western Africa and Southern Africa are the most financially globalised region among the SSA countries compared with the Eastern Africa region, in which the financial system constitutes a marginal portion of their channels of globalisation, while Central Africa is the least financially globalised in the SSA region. This indicated that the region lacks a vibrant financial structure and system to expand and attract PFIs for human welfare development.

Also, in assessing the extent of domestic capital formation for investment deepening in SSA, the mean of gross capital formation

(as a share of GDP) for Central, Eastern, Southern and Western Africa regions correspondingly stood at 17.6%, 19.2%, 20.1% and 12.8%. This shows that Southern and Eastern Africa had the most productive domestic capital for investment expansion during the reviewed period.

An inference that can be deduced from this analysis is that high domestic capital formation attracts huge capital inflows and enhanced access to improved sanitation, water and healthcare services, while low domestic capital deepening attracts low foreign PFI. Thus, in this instance, it resulted in grave incidence of human welfare deterioration. Comparatively, the relatively high financial globalised regions (Eastern and Southern Africa) recorded better human welfare development and adequate access to basic necessities of sustenance, while the highly capital globalised region (Central Africa) is characterised by grave incidence of deteriorating human welfare development and lack of access to basic necessities of life.

The mean value of net LBM as a component of social globalisation stood at -0.03%, -0.59%, 0.04% and 0.05% for Central, Eastern, Southern and Western Africa, respectively. This indicated a lot of active work flow out of Central and Eastern Africa, while more working emigrants entered Southern and Western Africa in the SSA region. Eastern Africa, consisting of Kenya, Mauritius, Tanzania and Uganda, is the least socially globalised region in SSA in terms of net LBM. Also, in terms of telephone line users per 1000 people (TEL) as a proxy for information flows of

globalisation, the mean average value stood at 23.25, 43.60, 35.52 and 5.22 for Central, Eastern, Southern and Western Africa regions, respectively. This suggests that Eastern and Southern Africa are the most socially globalised region in SSA countries compared with Central and Western Africa regions with respect to information flow. This contradicts the descriptive outcome of LBM for Eastern Africa. Likewise, the mean value of the governance index as an institutional control variable of globalisation and human welfare development for Central, Eastern, Southern and Western Africa regions, respectively stood at -27.5%, -15.2%, 10.5% and -29.3%. This reveals that Southern Africa was the only region with good governance performance compared with other regions in the SSA in the period under review. An inference that can be deduced from this analysis is that a high level of social globalisation via labour inflow complements evidence of deteriorating human development and limited access to HCS in Western Africa, while a high access to telephone facilities enhanced the development of human welfare changes as evidenced in Southern and Eastern Africa.

Estimated Panel Regression Results on Regional Basis

This section of the analysis was based on the sub-regional groups that make up the sub-Saharan Africa. The rationale for this was to examine whether there was conformity in the pooled regional analysis (SSA) and the sub-regional groups. It is also meant to verify if the pooled analysis for the SSA is influenced by any of the sub-regional data.

Estimated Panel Regression Results: Central Africa

The fixed effect regression results of human welfare, other welfare measures and access to basic necessity models for the Central Africa region that constitutes Cameroon, Central Africa Republic, Gabon and Rwanda are presented in Table 2. The results reveal that trade openness as economic dimension of globalisation was found to exert a negative effect on HDI, LEI, MYS, access to improved WAT, SAN and HCS, while it showed a positive effect on only IMR in the Central Africa region between 1980 and 2014. These effects were not in tandem with theoretical expectations. In terms of effect size, a 10% change in TRD lowered HDI, LEI, IMR, access to improved WAT, SAN and HCS by 0.72%, 0.33%, 3%, 4.3% and 0.47%, respectively, while increasing IMR by 2.52%. At 1% significance level, TRD as a channel of globalisation was found to statistically and significantly worsen human welfare, other welfare measures (LEI and MYS), and access to basic necessities (WAT, SAN and HCS) in the Central Africa region in the three decades under review.

The estimated theoretical model augmented with percentage share of working population to total population size (n) as control variable was found to enhance HDI, LEI, MYS, access to improved WAT, SAN and HCS, as well as reduced incidence of IMR in Central Africa. These effects conformed with the *a priori* expectations in terms of signs. The value of estimates reported in Table 2 indicated that a 1% increase in the share of the economically

active population increased HDI, LEI, MYS, WAT, SAN and HCS by 3.23%, 0.58%, 0.08%, 3.95%, 4.51% and 3.07%, respectively, while reducing IMR by 6.35% in Central Africa. Also, the t-statistic values indicate that at 1% critical level, working population (n) statistically and significantly improved human welfare, other welfare measures (LEI, IMR and MYS) and access to basic necessities (WAT, SAN and HCS) in the Central Africa region between 1980 and 2014.

The estimated augmented panel regression model further revealed that with the consideration of TRD as a component of globalisation along with other factors accounted for an average of 95.3%, 90.2% and 85.4% variation in human welfare, other

Table 2

Fixed effects regression of human welfare and transmission channel of globalisation in Central Africa

Variables	HDI	LEI	IMR	MYS	WAT	SAN	HCS
Constant	-126.7	25.80	412.9	-3.602	-140.3	-181.6	-110.1
	-39.45**	7.61**	55.65**	-43.05**	-29.95**	-30.85**	-21.35**
CFC	0.017	-0.037	-0.168	0.001	0.028	0.102	0.122
	1.05	-2.64**	-5.64**	1.49	0.97	3.49**	5.11**
TRD	-0.072	-0.033	0.253	-0.005	-0.300	-0.430	-0.047
	-10.44**	-5.12**	18.10**	-26.55**	-24.26**	-30.78**	-4.13**
PFI	-0.280	-0.574	0.740	0.005	0.182	1.802	-0.500
	-3.35**	-7.36**	4.90**	2.43*	1.34	8.71**	-3.36**
FDI	-0.184	-0.054	0.297	-0.001	-0.006	-0.489	-0.545
	-5.08**	-1.63	4.13**	-0.94	-0.10	-7.59**	-10.12**
LBM	-0.139	-0.047	0.604	-0.004	-0.174	-0.125	-0.030
	-18.28**	-3.97**	22.83**	-19.81**	-17.32**	-8.65**	-2.19*
GGI	0.001	0.031	-0.008	-0.001	-0.053	0.008	0.030
	0.48	19.06**	-2.28*	-19.62**	-18.36**	2.12*	10.45**
TEL	0.143	0.048	-0.661	0.010	0.979	0.216	-0.099
	12.82**	4.61**	-25.53**	28.39**	37.86**	10.76**	-5.82**
N	3.228	0.576	-6.354	0.080	3.953	4.506	3.068
	50.46**	8.55**	-43.43**	47.96**	42.02**	38.16**	29.80**
Adj. R-squared	0.953	0.869	0.958	0.879	0.858	0.851	0.854
S.E. of reg.	2.813	3.565	8.286	0.077	5.075	5.255	4.608
F-statistic	3896.9**	1274.2**	4333.6**	1400.1**	1159.5**	1097.4**	1125.3**
Observation	140	140	140	140	140	140	140
Cross-sections	4	4	4	4	4	4	4

Note: [1]. ** denotes significant at 5%; * denotes significant at 10%. [2]. Absolute t-statistics are shown below the coefficients. [3]. All regressions use the fixed cross-section effects, cross-section weights, standard errors and covariance (d.f. corrected)
Source: Authors' computation (2018)

welfare measures (LEI, IMR and MYS) and access to basic necessities (WAT, SAN and HCS), respectively in the Central Africa region.

The results equally revealed that FDI as capital flow channel of globalisation was found to exert a negative effect on HDI, SAN and HCS, while having a positive effect on IMR in the Central African region. These effects are not in tandem with theoretical expectations. In terms of effect size, a 10% change in FDI lowered HDI, IMR, SAN and HCS by 1.84%, 4.89% and 5.45%, respectively and increase IMR by 0.297%.

More so, the results presented in Table 2 reveal that PFI as financial dimension of globalisation exerts a negative effect on HDI, LEI, and HCS, while it exerts a positive effect on IMR in Central Africa. These effects were not in tandem with the theoretical expectations. For a 10% change in financial flow of globalisation (PFI), HDI, LEI, IMR and HCS declined by -2.8%, -5.74%, 7.4% and -5%, respectively. Similarly, PFI was found to enhance positively the IMR, MYS, and SAN in Central Africa region. In terms of signs, these effects conform with the *a priori* expectations. In magnitude terms, a 10% increase in financial channel of globalisation (PFI) enhanced MYS, WAT and SAN by 0.05%, 1.82% and 18.02%, respectively.

Gross fixed capital stock as a theoretical baseline input variable and measure of domestic capital formation was found to exert a positive effect on SAN and HCS, but a negative effect on LEI and IMR in the

region. These effects were in conformity with theoretical expectations based on signs of the reported estimates. In terms of intensity of effects, a 10% increase in fixed capital stock enhanced HDI, MYS, WAT, SAN and HCS by 0.17%, 0.01%, 0.28%, 1.02% and 1.22 %, while reducing LEI and IMR by 0.37% and 1.68%, respectively. Although, domestic capital formation was found to exert a negative effect on LEI in the Central Africa region, this is not in consonance with the theory. In terms of partial significance, the reported t-statistic values in Table 2 indicated that it was only the effect of fixed capital stock on LEI, IMR, SAN and HCS that were found statistically significant at the 1% critical level.

Comparatively, the analysis indicated that in the Central Africa region, capital and financial flows of globalisation worsened human welfare development, while it is only domestic capital formation that enhanced human welfare status in the region. The estimated augmented panel regression model further revealed that with the consideration of FDI and PFI as components of globalisation, other factors accounted for an average 95.3%, 90.2% and 85.4% variation in HDI, other welfare measures (LEI, IMR and MYS), and access to basic necessity (WAT, SAN and HCS) changes in the Central Africa region.

The results also showed that the net LBM as a labour flow dimension of globalisation exerted a negative effects on HDI, LEI and MYS access to improved WAT, SAN and HCS, while exerting a positive effect on IMR in Central Africa in the period under

consideration. These effects were not in tandem with the theoretical expectations, but were statistically significant at the 1% critical level. For a 10% increase in labour migration flow of globalisation (labour migration), HDI, LEI, MYS and access to improved WAT, SAN and HCS were lowered by 1.39%, 0.47%, 0.04%, 1.74%, 1.25% and 0.30%, respectively. However, IMR was raised by 6.04% for a 10% increase in labour migration.

Telephone access (TEL) as the information dimension of globalisation exerted a positive effect on HDI, LEI, MYS and access to improved WAT and SAN, but exerted a negative effect on IMR and HCS in Central Africa. These effects were in tandem with the *a priori* expectations except for access to HCS and were statistically significant at the 1% critical level. In terms of magnitude, a 10% change in information channel of globalisation (TEL) enhanced HDI, LEI, MYS and access to improved WAT and SAN by 1.43%, 0.48%, 0.10%, 9.79%, 2.16%, but caused a reduction in IMR, and lack of access to HCS by 6.61% and 0.99%, respectively in Central Africa during the review period.

Also, GGI as a theoretical baseline control variable and measure of institutional quality was found to exert a positive impact on LEI, access to improved SAN and HCS, but it had a negative effect on IMR, MYS and access to improved WAT in Central Africa. These were in consonance with the expected signs except for the effects on MYS and access to improved WAT. A 10% increase in GGI, enhanced LEI, SAN

and HCS by 0.31%, 0.08% and 0.30%, respectively, but it lowered IMR, MYS and access to improved WAT by 0.08%, 0.01% and 0.53%, respectively in the reviewed period.

Comparatively, the analysis indicated that in the Central Africa region, labour flow of globalisation and governance effectiveness worsened and lowered human welfare development, while only information flow of globalisation enhanced human welfare status in the region. The estimated augmented panel regression model further revealed that the consideration of net LBM and telephone access (TEL) as components of globalisation and other factors accounted for an average 95.3%, 90.2% and 85.4% variation in HDI, other welfare measures and access to basic necessities (WAT, SAN and HCS) in the Central Africa region.

Estimated Panel Regression Results: Eastern Africa

The theoretical augmented fixed regression results that captured the effect of TRD on HDI, other welfare measures (LEI, IMR and MYS) and access to basic necessities (WAT, SAN and HCS) in Eastern Africa, comprising Kenya, Mauritius, Tanzania and Uganda, are shown on Table 3. The results indicated that the economic dimension of globalisation via trade flow proxy by TRD was found to be positively related to the HDI, LEI and access to improved WAT, SAN and HCS in Eastern Africa. These effects conformed with the theoretical expectations and were found to be statistically significant at 1% critical level. Also, TRD was found

to exert a negative effect on IMR and MYS, but it is only the effect of the latter that is not in tandem with theoretical expectation. At 1% critical level, TRD exerted a significant negative effect on IMR and MYS in Eastern Africa.

In terms of magnitude, a 10% change in percentage share of total exports and imports as ratio of GDP improved HDI, LEI and access to improved WAT, SAN and HCS in East Africa by 0.49%, 0.75%, 1.97%, 0.59% and 0.83%, respectively as well as reduced IMR and MYS by -0.74% and -0.01%, respectively.

Table 3
Fixed effects regression of human welfare and transmission channel of globalisation in Eastern Africa

Variables	HDI	LEI	IMR	MYS	WAT	SAN	HCS
Constant	17.03	67.16	103.70	-1.07	-60.25	-19.84	65.98
	8.92**	53.61**	22.31**	-36.06**	-21.82**	-16.97**	30.33**
CFC	0.156	0.062	-1.219	0.006	-0.046	0.016	0.123
	9.66**	5.48**	-21.42**	23.29**	-1.63	1.20	8.43**
TRD	0.049	0.075	-0.074	-0.001	0.197	0.059	0.083
	6.94**	15.15**	-3.13**	-7.67**	15.37**	9.48**	13.88**
PFI	-0.010	-0.016	-0.007	0.0003	0.033	0.001	-0.018
	-3.41**	-8.10**	-0.57	5.29**	5.42**	0.21	-8.14**
FDI	1.514	0.569	-4.304	0.019	1.702	1.099	0.904
	37.54**	18.59**	-29.18**	24.88**	20.82**	28.93**	23.95**
LBM	0.276	0.023	0.873	-0.005	1.811	1.188	-0.189
	5.83**	0.67	5.09**	-6.49**	20.08**	26.41**	-4.35**
GGI	-0.035	0.031	0.037	-0.001	-0.142	-0.030	0.030
	-12.81**	14.34**	4.13**	-26.50**	-26.60**	-13.72**	9.71**
TEL	0.045	0.011	-0.017	0.000	0.020	0.026	0.030
	31.98**	10.79**	-3.47**	-0.06	7.30**	16.11**	22.97**
N	0.302	-0.305	-0.050	0.029	1.915	0.910	-0.362
	8.27**	-12.62**	-0.56	51.24**	35.44**	39.78**	-8.70**
Adj. R-squared	0.971	0.964	0.932	0.911	0.963	0.991	0.979
S.E. of reg.	2.572	1.856	8.474	0.044	4.691	2.264	3.093
F-statistic	6476.1**	5139.1**	2639.7**	1973.0**	5061.5**	21957.7**	8914.3**
Observation	140	140	140	140	140	140	140
Cross-sections	4	4	4	4	4	4	4

Note: [1]. ** denotes significant at 5%; * denotes significant at 10%. [2]. Absolute t-statistics are in next line to the coefficients. [3]. All regressions use the fixed cross-section effects, cross-section weights, standard errors and covariance (d.f. corrected)
Source: Authors' computation (2018)

Similarly, working age population (*N*) as a control variable was found to exert positive and significant impact on HDI, MYS, access to improved WAT and SAN in East Africa at 1% critical level. The effects were in line with the theoretical expectations. Likewise, the economically active population share (n) at 1% critical level exerted a negative and statistically significant effect on LEI, IMR and access to HCS in East Africa. It is only the effect on IMR that was found to conform with the *a priori* expectation. On the basis of the effect size, a 10% change in working age population share (n) enhanced HDI, MYS, WAT and SAN by 3.02%, 0.29%, 19.2% and 9.1%, respectively as well as reduced LEI, IMR and HCS by -3.1%, -0.5% and -3.62%, respectively during the reviewed period.

The theoretical augmented fixed regression results that captured the effect of FDI and PFI on HDI, other welfare measures (LEI, IMR and MYS) and access to basic necessities (WAT, SAN and HCS) in Eastern Africa indicated that the financial dimension of globalisation exerted a negative effect on HDI, LEI, IMR and access to improved HCS. These are not in consonance with the expected signs, excluding IMR. In magnitude terms, a 10% change in PFI deteriorates HDI, LEI and HCS by -0.10%, -0.16% and -0.18%, respectively, while it enhances reduction in IMR by 0.07%. Also, the financial channel of globalisation was found to exert a positive effect on MYS, access to improved WAT and SAN in the Eastern Africa region. These effects were in tandem with the expected signs.

The reported t-statistic results in Table 3 indicated that it was only the effect of PFI on HDI, LEI, MYS, WAT and HCS that were found to be statistically significant at 1% critical level.

Foreign direct investment as a capital dimension of globalisation exerted a positive effect on HDI, LEI, MYS and access to improved WAT, SAN and HCS, while it exerted a negative effect on IMR in Eastern Africa. These effects were in line with the *a priori* expectations and were statistically significant at 1% critical level. In terms of magnitude, a 1% change in the financial channel of globalisation (FDI) enhanced HDI, LEI, MYS, WAT, SAN, HCS and reduced IMR by 1.51%, 0.57%, 0.02%, 1.7%, 1.1%, 0.9%, and -4.3%, respectively.

Also, the gross fixed capital stock as a measure of domestic capital formation had a positive impact on HDI, LEI, MYS and access to improved SAN, and HCS, but had a negative effect on IMR and access to improved WAT in East Africa. These were in tandem with the expected signs excluding the effect of access to improved water. Based on the reported t-statistic values, it was only the effect of fixed capital stock on HDI, LEI, IMR, MYS and HCS that were statistically significant at 1% critical level. In magnitude terms also, a 10% change in fixed capital stock enhanced HDI, LEI, MYS, SAN and HCS but reduced the infant mortality rate by 1.56%, 0.62%, 0.06%, 0.16%, 1.23% and -12.19%, respectively, while it lowered access to WAT by -0.46% within the reviewed period.

On the basis of the foregoing analysis, it can be deduced that domestic capital formation (fixed capital stock) and capital dimension of globalisation (FDI) enhance human welfare development in Eastern Africa compared with the deteriorating effect of the financial dimension of globalisation (PFI) on human welfare status during the review period. In assessing the overall fitness of the estimated augmented panel regression models, the adjusted R-squared in Table 3 shows that the independent variables explained about 97.1%, 96.4%, 93.2% and 91.1% changes in HDI, LEI, IMR, and MYS. Also, about 96.3%, 99.1% and 97.9% changes in WAT, SAN and HCS respectively.

The theoretical augmented fixed regression results that captured the effect of net LBM and TEL on HDI, other welfare measures (LEI, IMR and MYS) and access to basic necessities (WAT, SAN and HCS) in Eastern Africa indicated that net LBM as a labour mobility flow of globalisation had a positive impact on HDI, LEI, IMR and access to improved WAT and SAN, while it had a negative effect on MYS and access to improved HCS in Eastern Africa. These were in tandem with the expected signs except for the effect on IMR, MYS and HCS. Based on the reported t-statistic values, the effect of LBM on HDI, LEI, IMR, MYS and access to basic necessities was statistically significant at 1% critical level. In magnitude terms also a 10% change in labour migration enhanced HDI, LEI, IMR and access to improved WAT and SAN by 2.76%, 0.23%, 8.73%, 18.11%

and 11.9%, respectively, while it lowered MYS and HCS by -0.05% and -1.89%, respectively over the reviewed period.

Access to telephone network (TEL) as the information dimension of globalisation exerted a positive effect on HDI, LEI, MYS and access to improved WAT, SAN and HCS, while it exerted a negative effect on IMR in Eastern Africa. These effects were in tandem with the *a priori* expectations and were statistically significant at 1% critical level except for the MYS parameter estimate. In terms of magnitude, a 10% change in the information channel of globalisation (TEL) enhanced HDI, LEI, MYS, WAT, SAN and HCS but caused a reduction in IMR by 0.45%, 0.11%, 0.001%, 0.20%, 0.26%, 0.30% and -0.17%, respectively as presented in Table 3.

The results further indicated that GGI as a measure of institutional quality exerted a positive effect on LEI, IMR and access to improved HCS in Eastern Africa. This was in tandem with theoretical expectation (except for IMR) and was statistically significant at 1% critical level. Also, GGI at 1% critical level had a negative but a significant impact on HDI, MYS and access to improved WAT and SAN in Eastern Africa. These effects were not supportive of theoretical expectations. In magnitude terms, a 10% change in GGI lowered HDI, MYS and access to improved WAT and SAN by -0.35%, -0.01%, -1.42% and -0.30%, respectively, while it enhanced LEI, IMR and HCS by 0.31%, 0.37% and 0.30%, respectively in Eastern Africa.

It can be deduced that information flow in terms of access to telephone lines enhanced human welfare development in Eastern Africa compared with the relatively deteriorating effect of LBM flow of globalisation on human welfare status during the reviewed period. In assessing the overall fitness of the estimated augmented panel regression models, the adjusted R-squared results revealed that LBM flow, information channel of globalisation and other factors accounted for an average 97.1%, 93.6% and 97.8% variation in human welfare, other welfare measures and access to basic necessities in the Eastern Africa region.

Estimated Panel Regression Results: Southern Africa

The impact of trade openness as a channel of globalisation on human welfare development for Botswana, Malawi, Mozambique and South Africa that made up the Southern Africa region is discussed in this sub-section. The fixed effect theoretical augmented models' estimates are shown in Table 4. The results indicated that in Southern Africa, trade openness (TRD) exerted a positive effect on the human development index (HDI), life expectancy index (LEI), mean year of adult schooling (MYS), access to improved water (WAT), sanitation (SAN) and healthcare services (HCS), while it exerted a negative effect on infant mortality rate (IMR). These effects conformed with the theoretical expectations and were found to be statistically significant at 1% critical level based on the reported t-statistic values under each welfare model.

On the basis of intensity of the effects, 10% change in TRD enhanced HDI, LEI, MYS and access to improved WAT, SAN and HCS by 1.21%, 0.68%, 0.01%, 1.66%, 0.78% and 0.79%, respectively as well as reduced IMR by -6.97% during the reviewed period.

Table 4 further indicated that working age population share (N) at 1% critical level exerted a positive and significant effect on HDI, IMR, MYS and access to WAT and SAN in Southern Africa. The effects are in consonance with theoretical expectation, excluding the effect of IMR. Also, at 1% critical level, economically active population size (N) was found to be negative and significantly related to the LEI and access to HCS in Southern Africa. In magnitude terms, 1% change in working age population share (N) enhanced HDI, IMR, MYS and access to WAT and SAN by 0.34%, 0.63%, 0.012%, 1.18% and 1.58%, respectively, while it reduced LEI and access to HCS in Southern Africa by -1.04% and -1.20%, respectively.

In assessing the overall fitness of the estimated augmented panel regression models, the adjusted R-squared results in Table 4 revealed that with TRD as a channel of globalisation and other factors account for an average of 97.2%, 91.8%, and 92.8% variation in HDI, other welfare measures (LEI, IMR, and MYS), and access to basic necessities (WAT, SAN and HCS) changes in Southern Africa region.

Table 4
Fixed effects regression of human welfare and transmission channel of globalisation in Southern Africa

Variables	HDI	LEI	IMR	MYS	WAT	SAN	HCS
Constant	11.46	105.09	104.33	-0.32	-17.45	-57.71	105.09
	5.74**	55.54**	12.00**	-13.36**	-4.73**	-25.10**	42.85**
CFC	-0.002	-0.003	0.388	-0.002	-0.051	-0.002	0.108
	-0.11	-0.21	4.79**	-6.38**	-1.81***	-0.12	6.37**
TRD	0.121	0.068	-0.697	0.001	0.166	0.078	0.079
	21.24**	13.50**	-22.29**	14.43**	16.07**	12.41**	12.06**
PFI	0.171	-0.071	-0.693	0.002	-0.033	0.140	0.109
	4.16**	-1.99*	-3.77**	3.35**	-0.41**	3.05**	2.05*
FDI	0.248	0.071	-2.192	0.004	0.399	0.201	0.372
	11.61**	3.97**	-18.54**	9.66**	10.28**	8.81**	14.74**
LBM	0.072	-0.001	-0.623	0.002	0.379	0.186	0.025
	4.85**	-0.04	-6.72**	7.91**	12.32**	10.39**	1.48
GGI	-0.055	-0.005	0.369	-0.001	-0.051	-0.050	-0.048
	-17.36**	-1.82***	21.23**	-12.77**	-8.36**	-13.69**	-12.96**
TEL	0.127	-0.019	-0.455	0.003	0.222	0.195	0.039
	16.37**	-2.80**	-12.57**	23.42**	14.70**	22.51**	3.90**
N	0.336	-1.043	0.629	0.012	1.182	1.580	-1.203
	8.42**	-27.74**	3.59**	25.10**	16.01	34.45**	-24.60**
Adj. R-squared	0.972	0.872	0.895	0.989	0.955**	0.982	0.848
S.E. of reg.	2.910	2.448	16.805	0.056	7.858	3.602	3.887
F-statistic	6665.3**	1307.1**	1635.0**	16642.0**	4032.7**	10538.6**	1073.5**
Observation	140	140	140	140	140	140	140
Cross-sections	4	4	4	4	4	4	4

Note: [1]. *** denotes significant at 1%; ** denotes significant at 5% and *denotes significant at 10%.
[2]. Absolute t-statistics are in next line to the coefficients. [3]. All regressions use the fixed cross-section effects, cross-section weights, standard errors and covariance (d.f. corrected)
Source: Authors' computation (2018)

The impact of capital and financial channels of globalisation on human welfare development for the Southern Africa region indicated that in Southern Africa, financial dimension of globalisation (PFI) exerted a positive effect on HDI, MYS and access to improved SAN and HCS, while it exerted a negative effect on IMR. These were in tandem with the expected signs. In magnitude terms, a 10% change in PFI enhanced HDI, MYS, SAN and HCS and reduced the infant mortality rate by 1.71%, 0.02%, 1.40% and 1.09%, respectively, while it deepened the reduction in infant mortality rate by -6.93%. Also, financial channel of globalisation (PFI) was found to exert a negative effect on LEI and access to improved WAT in the Southern Africa region. These effects were not in tandem with the expected signs. At 10% change

in PFI, LEI and access to improved WAT were lowered by -0.71% and -0.33%, respectively. The reported t-statistic results indicated that the effect of PFI on HDI, IMR, MYS and access to improved WAT, SAN and HCS were found to be statistically significant at 1% critical level and at 5% critical level for LEI.

Foreign direct investment as a capital dimension of globalisation exerted a positive effect on HDI, LEI, MYS and access to improved WAT, SAN and HCS, while it exerted a negative effect on IMR in Southern Africa. These effects were in tandem with the *a priori* expectations and were statistically significant at 1% critical level. In terms of magnitude, a 10% change in financial channel of globalisation (FDI) enhanced HDI, LEI, MYS and access to improved WAT, SAN, HCS but reduced IMR by 2.48%, 0.71%, 0.04%, 3.99%, 2.01%, 3.72% and -21.92%, respectively.

The results further indicated that gross fixed capital stock as a measure of domestic capital formation exerted a positive effect on access to improved HCS in Southern Africa. This was in tandem with theoretical expectation and was statistically significant at 1% critical level. Also, domestic capital formation (fixed capital stock) had a negative impact on HDI, LEI, MYS and access to improved WAT and SAN, while its impact on IMR was positive in Southern Africa in the period under review. These effects were not in tandem with theoretical expectations. In magnitude terms, a 10% change in fixed capital stock deepened deterioration of HDI, LEI, MYS and access to improved WAT,

SAN and IMR by -0.02%, -0.03%, -0.02%, -0.51%, -0.02% and 3.88%, respectively. The reported t-statistic values indicated that it was only the effect of fixed capital stock on IMR, MYS and HCS that were statistically significant at 1% critical level, while at 5% critical level, access to WAT was improved.

The above analysis indicated that financial and capital dimensions of globalisation (PFI and FDI) enhanced human welfare development in Southern Africa compared with the deteriorating effect of domestic capital formation (fixed capital stock) on human welfare status during the review period. In assessing the overall fitness of the estimated augmented panel regression models, the adjusted R-squared results revealed that with financial and capital channels of globalisation and other factors account for an average 97.2%, 91.8%, and 92.8% variation in HDI, other welfare measures (LEI, IMR, and MYS), and access to basic necessities (WAT, SAN and HCS) changes in Southern Africa region.

The impact of LBM and information channels of globalisation on human welfare development of Botswana, Malawi, Mozambique and Southern Africa indicated that in Southern Africa, net LBM as labour flow dimension of globalisation was found to exert a positive effect on HDI, MYS and access to improved WAT, SAN and HCS, but it had a negative effect on IMR in the Southern Africa region in the period under review.

These effects were in line with theoretical expectations based on signs of the reported estimates. In terms of intensity of effects, a 10% change in labour migration enhanced HDI, MYS and access to improved WAT, SAN and HCS, but reduced IMR by 0.72%, 0.02%, 3.79%, 1.86%, 0.25% and 6.23%, respectively. Also, net LBM was found to exert a negative effect on LEI in the Southern Africa region by a magnitude of -0.01% with a 10% change. This was not in tandem with the expected sign. In terms of partial significance, the reported t-statistic values in Table 4 indicated that it was only the effect of LBM on HDI, IMR, MYS, WAT and SAN that were statistically significant at 1% critical level.

Also, access to telephone network (TEL) as the information flow dimension of globalisation exerted a positive effect on HDI, MYS and access to improved WAT, SAN and HCS, but exerted a negative effect on LEI and IMR in Southern Africa. These effects were in tandem with the *a priori* expectations (except for LEI) and were statistically significant at 1% critical level. In terms of magnitude, a 10% change in information channel of globalisation (TEL) enhanced HDI, MYS and access to improved WAT, SAN, HCS, but reduced LEI and IMR by 1.27%, 0.03%, 2.22%, 1.95%, 0.39%, -0.19% and -4.55%, respectively.

The results presented in Table 4 further reveal that GGI as an institutional control variable was found to exert a negative effect on HDI, LEI, MYS and access to improved WAT, SAN and HCS and a positive effect on IMR in the Southern Africa region. These

effects were not in tandem with theoretical expectations. In terms of effect size, a 10% change in GGI lowered HDI, LEI, MYS and access to improved WAT, SAN and HCS by -0.55%, -0.05%, 3.69%, -0.01%, -0.51%, 0.50% and 0.48%, respectively. The reported t-statistic values indicated that the GGI effect on HDI, LEI, IMR and access to improved WAT, SAN and HCS was statistically significant at 1%, while it was at 10% critical level for LEI in Southern Africa.

The above analysis indicated that the labour mobility and information dimensions of globalisation (LBM and TEL) enhanced human welfare development in Southern Africa compared with the deteriorating effect of GGI on human welfare status during the reviewed period. In assessing the overall fitness of the estimated augmented regression models, the adjusted R-squared reveal that labour and information channels of globalisation and other factors account for an average 97.2%, 91.8%, and 92.8% variation in human welfare, other welfare measures (LEI, IMR, and MYS), and access to basic necessities (WAT, SAN and HCS) changes in Southern Africa region.

Estimated Panel Regression Results: Western Africa

The theoretical augmented fixed regression results that captured the effect of TRD on HDI, other welfare measures (LEI, IMR, and MYS) and access to basic necessities (WAT, SAN and HCS) in Western Africa, comprising Benin, Ghana, Niger and Nigeria, are shown in Table 5. The results

indicated that at 1% critical level, TRD as a channel of globalisation exerted a positive and significant effect on the HDI, IMR, MYS and access to improved WAT. Only the effect on IMR was found not to conform with the theoretical expectations in Western Africa. Similarly, at 1% critical level, TRD as the economic dimension of globalisation was found to exert a negative and significant effect on the LEI, access to improved SAN and HCS in Western Africa. These effects were not in tandem with theoretical expectations. Also, in terms of the magnitude, a 10% change in TRD enhanced HDI, IMR, MYS and access to improved WAT by 0.16%, 0.95%, 0.01% and 0.92% respectively, but reduced LEI, access to improved SAN and HCS by -0.29%, -0.28% and -0.17%, respectively.

Economically active population share (*N*) as a theoretical control variable was found to be significantly and negatively related to the HDI, LEI, MYS and access to HCS in the Western Africa region at 1% critical level. The effects were not in consonance with the theoretical expectations. Also, the percentage share of working age population of total (*N*) was found to be significant and positively related to the IMR and access to WAT and SAN in West Africa at 1% critical level. At 1% change in economically active population (*N*), HDI, LEI, MYS and access to HCS dropped by -0.36%, -0.65%, -0.07% and -0.46%, respectively, but IMR and access to WAT and SAN were improved by 4.23%, 2.56% and 0.44%, respectively.

In assessing the overall fitness of the estimated augmented panel regression models, the adjusted R-squared revealed that with TRD as a channel of globalisation and other factors account for an average 94%, 90%, and 93.6% variation in HDI, other welfare measures (LEI, IMR, and MYS), and access to basic necessities (WAT, SAN and HCS) changes in West Africa region in the period under review.

The theoretical augmented fixed regression results that captured the effects of capital and financial openness (PFI and FDI) on HDI, other welfare measures (LEI, IMR and MYS) and access to basic necessities (WAT, SAN and HCS) in Western Africa indicated that PFI as the financial dimension of globalisation exerted a negative effect on HDI, LEI, MYS and access to improved WAT, SAN and HCS and a positive effect on IMR in Western Africa. These effects were not in tandem with the theoretical expectations. For a 1% change in financial flow of globalisation (portfolio investment), HDI, LEI, IMR, MYS and access to WAT, SAN and HCS lowered by -1.69%, -1.09%, 6.19%, -0.05%, -2.28%, -0.24% and -1.66%, respectively. Based on the reported t-statistic values in Table 5, it can be seen that only the effect of PFI on HDI, LEI, IMR, MYS and access to improved WAT, SAN and HCS were statistically significant at 1% critical level in Western Africa.

Foreign direct investment as a capital dimension of globalisation exerted a positive effect on HDI, LEI, MYS and access to improved WAT, SAN and HCS, while exerting a negative effect on IMR in Western

Table 5
Fixed effects regression of human welfare and transmission channel of globalisation in Western Africa

Variables	HDI	LEI	IMR	MYS	WAT	SAN	HCS
Constant	44.16	80.99	-89.77	3.42	-97.12	-11.30	64.60
	10.26**	24.03**	-5.55**	19.11**	-13.39**	-4.88**	13.53**
CFC	0.072	0.217	-1.040	0.003	0.273	0.121	0.175
	4.81**	18.51**	-18.55**	4.48**	10.72**	13.66**	11.25**
TRD	0.016	-0.029	0.095	0.001	0.092	-0.028	-0.017
	3.60**	-10.55**	6.56**	3.45**	14.69**	-11.12**	-4.31**
PFI	-1.692	-1.086	6.186	-0.050	-2.278	-0.242	-1.660
	-26.54**	-27.96**	28.44**	-20.63**	-25.18**	-5.81**	-26.84**
FDI	0.401	0.285	-1.225	0.003	0.761	0.198	0.482
	18.01**	15.81**	-14.19**	3.18**	19.70**	17.12**	18.93**
LBM	-0.053	-0.057	1.640	0.0002	0.848	-0.046	-0.092
	-1.01	-1.34	8.28**	0.07	9.02**	-1.47	-1.79***
GGI	-0.045	-0.018	0.138	-0.002	-0.050	-0.012	-0.033
	-28.95**	-18.25**	25.85**	-32.15**	-21.36**	-11.59**	-22.95**
TEL	0.906	0.441	-3.442	0.035	0.945	0.321	0.828
	34.47**	24.06**	-36.88**	29.43**	22.74**	22.34**	32.03**
N	-0.359	-0.652	4.229	-0.066	2.556	0.439	-0.463
	-4.23**	-9.81**	13.26**	-18.71**	17.89**	9.58**	-4.91**
Adj. R-squared	0.940	0.889	0.880	0.929	0.923	0.963	0.920
S.E. of reg.	2.384	1.984	9.005	0.107	4.065	1.720	2.841
F-statistic	2987.7**	1543.8**	1410.4**	2526.1**	2293.5**	5053.2**	2222.3**
Observation	140	140	140	140	140	140	140
Cross-sections	4	4	4	4	4	4	4

Note: [1]. *** denotes significant at 1%; ** denotes significant at 5% and *denotes significant at 10%.
[2]. Absolute t-statistics are in next line to the coefficients. [3]. All regressions use the fixed cross-section effects, cross-section weights, standard errors and covariance (d.f. corrected)
Source: Authors' computation (2018)

Africa. These effects were in tandem with the *a priori* expectations and were statistically significant at 10% critical level. In terms of magnitude, a 10% change in the financial channel of globalisation (FDI) enhanced HDI, LEI, MYS and access to improved WAT, SAN and HCS but reduced IMR by 4.01%, 2.85%, 0.03%, 7.61%, 1.98%, 4.82% and -12.3%, respectively.

Similarly, gross fixed capital stock as a theoretical baseline input variable and measure of domestic capital formation

was found to exert a positive effect on HDI, LEI, MYS and access to improved WAT supply, SAN and HCS, while having a negative effect on IMR in the Western Africa region. These effects were in tandem with theoretical expectations based on signs of the reported estimates. In terms of intensity of effects, a 10% change in fixed capital stock enhanced HDI, LEI, MYS and access to improved WAT supply, SAN and HCS but reduced IMR by 0.72%, 2.17%, 0.03%, 2.73%, 1.21%, 1.75% and -10.4%, respectively. In terms of partial significance, the reported t-statistic values indicated that the effect of fixed capital stock on HDI, LEI, IMR, MYS and access to improved WAT, SAN and HCS were found to be statistically significant at the 1% critical level.

In comparative terms, the entire analysis revealed that domestic capital formation and capital channel of globalisation enhanced human welfare development, while the financial dimension of globalisation worsened human welfare development in the Western Africa region during the reviewed period. In assessing the overall fitness of the estimated augmented panel regression models, the adjusted R-squared results reveal that with PFI and FDI as channels of globalisation and other factors accounts for an average 94%, 90%, and 93.6% variation in HDI, other welfare measures (LEI, IMR, and MYS), as well as access to basic necessities (WAT, SAN and HCS) changes in West Africa region.

The theoretical augmented fixed regression results that captured the effect of LBM and information flow on human welfare, other welfare measures and access to basic necessities in Western Africa indicated that net LBM as a channel of labour flow and a dimension of globalisation exerted a negative effect on HDI, LEI and access to improved SAN and HCS, while exerting a positive effect on IMR, MYS and access to improved WAT in Western Africa in the period under review. These effects were not in consonance with the theoretical expectations (except for MYS and WAT). A 10% change in labour flow of globalisation (LBM), HDI, LEI, IMR and access to improved WAT, SAN and HCS dropped by -0.53%, -0.57%, 16.4%, -0.46% and -0.92%, respectively, while MYS and access to improved WAT were enhanced by 0.002% and 8.48%, respectively during the reviewed period in Western Africa. In terms of partial significance as reported by the t-statistic values shown in Table 5, only the effect of LBM on IMR and access to improved WAT were found significant at 1% critical, while for HCS it was significant at 10% critical level.

Access to telephone network (TEL) as the information dimension of globalisation exerted a positive effect on HDI, LEI, MYS and access to improved WAT, SAN and HCS, but exerted a negative effect on IMR in Western Africa. These effects were in consonance with the *a priori* expectations and were statistically significant at 1% critical level. In terms of magnitude, a 1% change in information channel of globalisation (TEL) enhanced HDI, LEI, MYS and access to improved WAT, SAN and HCS but reduced IMR by 9.06%,

4.41%, 0.35%, 9.45%, 3.21%, 8.28% and -34.42%, respectively as reported in Table 5.

Institutional and governance quality as measured by GGI was found to exert a negative effect on HDI, LEI, MYS and access to improved WAT, SAN and HCS, but a positive effect on IMR in the Western Africa region. These effects were not in tandem with theoretical expectations. In terms of effect size, a 10% change in GGI lowered HDI, LEI, MYS and access to improved WAT, SAN and HCS by -0.45%, -0.18%, 1.38%, -0.02%, -0.50%, -0.12% and -0.33%, respectively. The reported t-statistic values indicated that GGI effects on HDI, LEI, IMR and access to improved WAT, SAN and HCS were found statistically significant at 1% in Western Africa during the period under review.

Comparatively, the entire analysis revealed that the information flow channel of globalisation enhanced human welfare development, while the LBM dimension of globalisation and governance quality worsened human welfare development in the Western Africa region during the reviewed period. In assessing the overall fitness of the estimated augmented panel regression models, the adjusted R-squared revealed that the consideration of net LBM and access to telephone lines (TEL) as channels of globalisation and other factors accounted for an average 94%, 90% and 93.6% variations in other welfare measures and access to basic necessity changes in the Western Africa region.

DISCUSSION AND CONCLUDING IMPLICATIONS

Africa, especially the Sub-Saharan Africa (SSA) region, is one of the areas among developing and emerging nations that has witnessed an increased and intensive level of globalisation through trade relations, capital flows, labour migration and technological transfers in the last three decades. This degree of globalisation has been further accelerated by political participation of the region, which lessened restrictions to free flow of information and technological transfer among globalising countries. This high degree of globalisation has translated to growth, but these gains have not been reflected in qualitative welfare for most developing countries and thus, have precipitated inconclusive debates on the precise directional link between globalisation dimensions and human welfare changes. Therefore, this study examined the regional impact of the transmission channel of globalisation on human welfare in 16 SSA countries from 1980 to 2014.

The findings indicated that trade openness enhanced human welfare development and the access of people to infrastructural facilities for the Central, Eastern, Southern and Western Africa sub-regions. In addition, it showed that among the indices, FDI was found to be predominantly human-welfare enhancing in the Eastern and Southern Africa regions in the SSA. Evidence from the sub-regions revealed that information flow via number of telephone line subscribers as a dimension of globalisation exerted a positive impact

on human welfare development, infant mortality ratio and improved access to basic necessities (water) in Central, Eastern, Southern and Western Africa. In addition, high labour migration and emigration of experts as a dimension of globalisation was found to worsen human welfare development and hinder basic infrastructural development in the Central, Eastern and Western Africa regions of Africa. The study found that the high level of social globalisation via labour inflow, access of people to telephone and Internet facilities enhanced the development of human welfare changes as evidenced in Southern Africa. However, bad and ineffective governance was found to have the highest negative impact on human wellbeing improvement in terms of magnitude and statistical significance in all the sub-regions.

There is need for policy-makers in each SSA country to continuously increase the adoption and utilisation of inclusive growth-oriented trade policy tools such as moderate tariffs and non-tariff barriers to guide trade interactions with the global world, especially via export promotion to facilitate development of human wellbeing. Also, harmonisation of trade tariffs and reforms among SSA countries will further improve future multilateral trade negotiations, break down structural constraints emanating from open trade regimes and reduce restrictive trade measures such as import duties and taxes to enhance the capability of people through domestic production and reduction in demand for imported goods. Lastly, governance as a crucial determinant of human welfare development in the SSA region requires guided and transparent operations in its implementation of policies that directly affect people, eradicate corruption, foster political stability and further enhance the adherence to the rule of law.

REFERENCES

Adeyemi, S. L., Ijaiya, G. T., Ijaiya, M. A., & Kolawole, S. D. (2006). Determinants of human development in Sub-Sahara Africa. *Africa Journal of Economic Policy, 13*(2), 1–25.

Bhagwati, J., & Srinivasan, T. N. (2002). Trade and poverty in the poor countries. *American Economic Review, 92,* 180–183.

Chan, N., & Dung, T. K. (2002). Development of CGE model to evaluate tariff policy in Vietnam. *International Conference on Policy Modeling* (EconMod2002), Free University of Brussels, Belgium.

Choi, C. (2006). Does foreign direct investment affect domestic income inequality? *Applied Economic Letters, 13,* 811–814.

Department for International Development. (2012). *DFID Annual Report and Accounts 2012 to 2013*. London: The Stationery Office. Retrieved January 10, 2017 from https://www.unicef.org/health/files/Annual-report-accounts-2011-12.pdf

Dollar, D., & Kraay, A. (2004). Trade, growth and poverty. *Economic Journal, 114*, 22–49.

Dreher, A. (2006). Does globalisation affect growth? Empirical evidence from a new Index. *Applied Economics, 38*(10), 1091–1110.

Dreher, A., & Gaston, N. (2008). Has globalisation increased inequality? *Review of International Economics, 16*(3), 516–536.

Dreher, A., Gaston, N., & Martens, P. (2008). *Measuring globalisation: Gauging its consequence*. New York: Springer.

Fosu, A. K., & Mold, A. (2008). Gains from trade: Implication for labour market adjustment and poverty reduction in Africa. *African Development Review/Reme Africaine de Development, 20*(1), 20–48.

Geda, A., & Shimeless, A. (2006). *Openness, inequality and poverty in Africa*. New York, United States: United Nations Department of Economic and Social Affairs.

Gold, K. (2009). Globalisation and poverty: Comparative analysis of Bangladesh and Nigeria. *ASBBS annual Conferences* (*16*, 1-13). Las Vegas.

Guordon, J., Maystre, N., & De Melo, J. (2008). Openness, inequality and poverty: endowment matter. *Journal of International Trade and Economic Development, 17*(3), 343–378.

Hai, S. S., Minhaj, S. Q., Ahmed, R., & Mujahid, Y. (2006). Impact of globalisation and liberalization on growth, poverty and income inequality: A case of Pakistan. Retrieved February 3, 2017 from https://editorialexpress.com/cgi-bin/conference/download.cgi?db name=SERC2007&paper_id=241

Hammed, A., & Nazir, A. (2009). Economic globalisation and its impact on poverty and inequality: Evidence from Pakistan. Retrieved January 23, 2017, from http://www.eco.int/ftproot/Publications/Journal/1/ ArticleTDB.pdf

Hammoris, S., & Kai, H. (2009). Globalisation, financial depth and inequality in Sub-Saharan Africa. *Economics Bulletin, 29*(3), 2025–2037.

Harrison, A. (2006). Globalisation and poverty. NBER Working Paper No. 12347. Retrieved January 9, 2017, from http://www.nber.org/papers /w12347

Heinrich, A. (2009). National symbol, globalisation and the well-being of nations. MPRA Paper No 14882. Retrieved January 23, 2017, from http://mpra.ub.uni-muenchen.de/14882/

Heshmati, A. (2003). The relationship between income inequality and globalisation. MPRA Paper No. 3897. Retrieved January 16, 2017, from http://mpra.ub.uni-muenchen.de/3897/

Jeffery, I. R. (2007). *Globalisation, growth, inequality and poverty in Africa. United Nations University. UNU-WIDER*. World Institute for Development Economics Research.

Khor, M. (2002). A perspective of globalisation and its implications for developing countries. Paper presented at the CSGR conference on *Globalisation Growth in Equality* at University of Warwick, March 2002. Retrieved January 20, 2017, from http://www.warwick.ac.uk/fac/soc/CSGR/ pkhor.pdf

Lee, E., & Vivarelli, M. (2006). The social impact of globalisation in the developing countries. *International Labour Review, 145*(3), 167–184.

Ligon, E. (2006). Poverty and the welfare costs of risk associated with globalization. *World Development*, *34*(8), 1446–1457.

Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics, 22,* 3–42.

Maertens, M., Colen, L., & Swinnen F. J. (2011). Globalisation and poverty in Senegal: A worst case scenario? *European Review of Agricultural Economics, 38*(1), 31–54.

Maku, E. O. (2015). *Globalisation and human welfare in Sub-Saharan Africa (1980-2012)* (Unpublished PhD Thesis), University of Ibadan, Nigeria.

Milanovic, B., & Squire, L. (2005). *Does tariff liberalisation increase wage inequality? Some empirical evidence*. National Bureau of Economic Research (No. w11046).

Neutel, M., & Heshmati, A. (2006). *Globalisation inequality and poverty relationship: A cross country evidence*. IZA Discussion Paper No.

2223. Retrieved February 3, 2017, from https://papers.ssrn.com/sol3/ Papers.cfm? Abstract_id=921391

Nissanke, M., & Thorbecke, E. (2008). Introduction: Globalisation-poverty channels and case studies from Sub-Sahara Africa. *Africa Development Review, 20*(1), 1–19.

Nissanke, M., & Thorbecke, E. (2010). Globalisation, poverty and inequality in Latin America: Findings from case studies. *World Development, 38*(6), 797–802.

Ravallion, M. (2006). Looking beyond averages in trade and poverty debate. *World Development, 34*(8), 1374–92.

Rebelo, S. (1991). Long run policy analysis and long run growth. *Journal of Political Economy, 99*(3), 500–521.

Romer, P. M. (1986). Increasing returns and long run growth. *The Journal of Political Economy, 94*(5), 1002–1037.

Santarelli, E., & Figini, P. (2002) Does Globalization Reduce Poverty? Some Empirical Evidence for the Developing Countries (Working Paper No. 459), Department of Economics, University of Bologna. Retrieved January 10, 2017 from http://amsacta.unibo.it/633/1/459.pdf

Siddiqui, R., & Kemal, R. A. (2002) Remittances, trade libralization and poverty in Pakistan: The role of excluded variables in poverty change analysis (A pakistan Institute of Development (PIDE) Research Study. MPRA Paper No. 4228). Retrived January 10, 2017 from http://mpra.ub.uni-muenchen.de/4228/

Sylvester, K. (2005). Foreign direct investment growth and income inequality in less developed countries. *International Review of Applied Economic, 19,* 289–300.

United Nations Conference on Trade and Development (UNCTAD). (2006). *World investment report 2006, Trend and determinants.* New York, USA.

UNCTAD. (2013). *World investment report 2013. Trend and determinants.* New York, USA.

UNDP (2009) *Human Development Report 2009 Overcoming barriers: Human mobility and development*. New York: Oxford University Press

UNDP. (2012). *Assessing progress in Africa towards the millennium development goals* (MDG Report, The Publications and Conference Management Services [PCMS]). Division of UNECA: Addis Ababa.

UNDP. (2013). *Human development report*. New York: Oxford University Press.

Wagle, U. R. (2007). Are economic liberalisation and equality compatible? Evidence from South Asia. *World Development, 35*(11), 1836–1857.

World Bank. (2002). *Global economic prospects and developing countries: Making trade work for the poor*. Washington, DC: World Bank.

World Bank. (2006). *World development report, 2006*. Washington DC, The World Bank.

World Bank. (2013). *World development report, 2013*. Washington DC, The World Bank.

World Bank. (2016). *World Development Indicators*. Washington DC, The World Bank.

Therapeutic Communication of Iranian Nursing Students: A Qualitative Study

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ABSTRACT

Establishing therapeutic communication with patients is considered as one of the most important duties of nursing students. Although therapeutic communication is a fundamental part of nursing education, its various attributes have not been clearly determined in nursing literature. Therefore, this qualitative study was conducted to explore therapeutic communication between patients and nursing students in the Iranian context through perceptions of nursing students, nursing instructors, and patients. In-depth, semi-structured interviews were conducted with a purposeful sample of six nursing students, six nursing instructors, and six patients as per the inclusion criteria. The data collection process continued in the field until theory saturation was reached. Data analysis was conducted by using a conventional content analysis approach over 8 months in 2016. Data analysis revealed three categories: "a measure to deliver patient-centered care," "emotional companionship," and "a phenomenon affected by values." These categories were considered as therapeutic communication defining traits. Putting more emphasis on therapeutic communication instruction and facilitating the recruitment of more men into the nursing career are recommended.

Keywords: Communication, Iran, nursing, qualitative research, students

INTRODUCTION

One of the critical necessities of life is communication, which is defined as a multidimensional information exchange between people. Communication is a required skill in all human activities (Johnston et al., 2012). In the medical professions, communication is of great importance, because it leads to desirable outcomes in patients, such as reducing pain and improving health (Baghcheghi et al., 2011; Claramita et al., 2016; Rosenberg & Gallo-Silver, 2011). Thus, communication plays an important role in clinical nursing performance, and nurses must be able to effectively communicate with patients to perform their different roles (Street Jr, 2013). Birks and colleagues (2015) wrote that one of the most important aspects of professional communication was therapeutic communication between the nurse and the patient. Therapeutic communication is defined as an empathic interaction between the healthcare provider and the patient to enhance the patient's coping with disease complications. Heligard Peplau, a psychiatric nurse who proposed the theory of interpersonal relations, mainly contributed to the development of the therapeutic communication subject in the nursing discipline (Heath & Bryant, 2013). She described that there were three stages of therapeutic communication: identification, working, and termination. During the identification phase, the nurse tries to get to know the patient and determines his/ her psychological and physical problems. In the second phase, the nurse provides

quality care or education to promote the patient's health and autonomy. Later, the nurse summarizes the relationship process and evaluates the effect of communication on the patients' outcomes (Alligood, 2014). Because of health system reforms, the patients' charter of rights, and the patient-centered care approach, health executives are paying particular attention to therapeutic communication as a skill required by all healthcare providers (Parsapoor et al., 2013). The Iranian Nursing Organization (the main nursing foundation in Iran), along with other international organizations, has included therapeutic communication in its code of ethics (Zahedi et al., 2013). Therefore, Iranian nursing students are taught about therapeutic communication during the theory classes on the "fundamentals of nursing" and "psychiatric nursing." However, nursing instructors do not use simulation methods in preparing students to use therapeutic communication effectively in clinical rotations (Baghcheghi et al., 2011). Nursing students, the future backbone of the health system, need to communicate with patients to provide quality care (Imran, 2013). In some studies, a weak relationship between nursing pupils and patients has been considered as the main stressor in clinical placements which affects trainees' mental and physical health and reduces their motivation to learn (Jamshidi et al., 2016; Rosenberg & Gallo-Silver, 2011). There are some qualitative studies regarding the nursing trainee-patient therapeutic communication in different countries (de Lima et al., 2011; Suikkala & Leino-Kilpi, 2005) as well as

in Iran (Heidari & Mardani Hamooleh, 2015; Jouzi et al., 2015; Loghmani et al., 2014). These studies addressed therapeutic communication concept and its related factors and explored the experiences of some stakeholders. Suikkala and Leino-Kilpi (2005) interviewed Finnish patients and students, and de Lima et al. (2011) analyzed the videos of the interactions between Brazilian nursing pupils and patients. Loghmani et al. (2014) interviewed nurses and patients, Jouzi et al. (2015) interviewed nurses and nursing students, and Heidari and Mardani Hamooleh (2015) held interview sessions with nursing pupils. The findings of these studies demonstrated the weakness of nursing students' therapeutic communication and the important role of nursing educators' instructions in facilitating therapeutic communication in the clinical setting (de Lima et al., 2011; Heidari & Mardani Hamooleh, 2015; Suikkala & Leino-Kilpi, 2005). These results are supported by other quantitative studies regarding nursing students' therapeutic communication with patients (Baghcheghi et al., 2011; Kiani et al., 2016; Shafakhah et al., 2015; Sheldon & Hilaire, 2015).

Based on our experience, nursing student-patient therapeutic communication is formed by the involvement of nursing students, instructors, and patients. However, there are no studies on therapeutic communication involving all stakeholders as participants. Also, Heath and Bryant (2013) mentioned that therapeutic communication was a context-based concept which was affected by various properties of the people involved in it. Therefore, it is necessary to conduct a qualitative research engaging all stakeholders to answer this question: "What is the students', patients', and instructors' perception of Iranian nursing students' therapeutic communication?" Gaining a deep knowledge about the nursing student-patient therapeutic communication provides nursing students with the information necessary to help them connect with patients therapeutically. Furthermore, nursing education executives as well as clinical instructors may use this study results to place more emphasis on therapeutic communication in the educational curriculum. Therefore, this study is aimed at exploring nursing student-patient therapeutic communication from the perspective of different participants including nursing students, instructors, and patients.

METHODS

Sampling and Data Collection

This study adopted a qualitative methodology to provide a comprehensive view of the different characteristics of Iranian nursing student-patient therapeutic communication. Polit and Beck (2014) mentioned that qualitative inquiry was helpful to extract data from key informants and to clarify important nursing phenomena. Based on the research question, content analysis was applied to analyze participants' experiences and to provide insight into therapeutic communication characteristics. Content analysis is a systematic methodology for data interpretation with the following three

approaches: conventional, summative, and directed. We adopted the conventional content analysis method due to the paucity of literature on the subject. In this approach, researchers interpret participants' points of views without having a predetermined analyzing framework (Elo et al., 2014).

Individual interviews were used as a data collection method in this research. In-depth, semi-structured interviews were conducted by this study's second author, who is a female PhD candidate in nursing and adequately trained in conducting interviews for qualitative studies. She has worked as a clinical nurse and a nursing instructor for several years. After spending some time in the clinical field, willing participants with rich experiences of therapeutic communication were selected by the second author among the nursing students, instructors, and patients through purposeful sampling methods. A maximum variation sampling strategy was used in terms of participants' age, gender, and work experience. The inclusion criteria for the different study participants were as follows: students having passed at least one clinical rotation, instructors with at least one year of clinical teaching experience in hospitals affiliated with Tehran University of Medical Sciences, and conscious patients who were cared for by nursing students for a minimum of 5 days.

After a face-to-face warm-up, the researcher explained the aims of research and assured the participants of data confidentiality. All participants accepted to participate in the interview and provided signed written informed consent. Interviews were held in a suitable place according to the participant's choice or at the interviewer's room at the school of nursing & midwifery. An interview guide was used which included some important questions, such as "what do you think about nursing student-patient therapeutic communication?" as well as probing questions used to elicit a clear answer. The interviewer made field notes during the interviews. When the interviewer did not get any new information, she summarized the key points mentioned in the interview and asked the participant about any pending issue that he/she wanted to add, at the end of the interview.

Data Analysis

Data collection and analysis were performed simultaneously over 8 months. The interviews lasted between 20 and 50 min, with an average of 33 min. Face-to-face interviews were audio-recorded and then transcribed verbatim using the conventional content analysis methodology. Conventional or inductive content analysis approach has three overlapping steps: data preparation, data organization, and data reporting. In the first step, after qualitative data collection, we began data interpretation by choosing units of analysis and deciding about the method of data classification (latent or manifest content). Considering whole interviews as the units of analysis, four researchers reviewed the texts several times to obtain a general idea of their content. Transcripts were returned to the participants for correction if they contained contradictory

information. After thoroughly reviewing the data, the researchers read the manifest content of the text word-for-word. In the second phase, the researchers generated primary codes by abstracting meaning units, sorted codes into various subcategories based on their similarities and differences, and then, created more abstract categories by grouping related subcategories. In the third phase, the researchers reported the process of data analysis and the obtained results in appropriate format with the related story line (Vaismoradi et al., 2013). MAXQDA 12 software (VERBI GmbH, Germany) was used to facilitate the content analysis process. After the 18th interview was interpreted, new codes stopped emerging from the interviews, and thus, the researchers decided that data saturation was reached. Demographic characteristics of the research participants are presented in Table 1.

Table 1
Demographic characteristics of research participants

Number Participant Code	Participant Code	Educational Level	Age (year)	Gender	Working Experience
1	Akbar	Sophomore nursing student	21	Male	-
2	Zahra	Sophomore nursing student	20	Female	-
3	Saied	Junior nursing student	22	Male	12 months
4	Samira	Junior nursing student	21	Female	2 months
5	Sahar	Senior nursing student	23	Female	6 months
6	Saman	Senior nursing student	23	Male	24 months
7	Habib	Bachelor degree	49	Male	25 Years
8	Saleh	Master degree	32	Male	6 Years
9	Zinab	PhD student	31	Female	4 Years
10	Rahim	Faculty with Master degree	56	Male	25 Years
11	Sara	Faculty with PhD degree	37	Female	10 Years
12	Elham	Faculty with Master degree	47	Female	23 Years
13	Fatima	High school diploma	60	Female	-
14	Ahmed	High school diploma	36	Male	-
15	Ayeshe	Bachelor degree student	30	Female	-
16	Majed	Illiterate	69	Male	-
17	Sasan	High school diploma	49	Male	-
18	Efat	Primary school diploma	50	Female	-

To establish rigor in this qualitative research, the researchers applied credibility, dependability, and transferability. All members of the research team participated in the data evaluation and discussed the coding process until they reached an agreement. For data credibility, maximum variation sampling, peer check, and member check

were used. Using member check for five of the participants provided the researchers with an opportunity to correct interpretation errors and avoid false data. Six external scholars, who were experts in the qualitative study and communication domains, helped in the peer check process. The researchers enhanced dependability and transferability by using a thorough audit trail including their field notes to help other researchers traced the project process and evaluated the data quality (Graneheim et al., 2017).

This research was approved by the Ethics committee of the University of Medical Sciences [(IR.TUMS.REC.1394.807)] and followed the ethical principles in accordance with the Declaration of Helsinki.

RESULTS

The interview data analysis yielded 22 codes, nine subcategories, and three categories as follows: "a measure to deliver patient-centered care," "emotional companionship," and "a phenomenon affected by values" which are considered as therapeutic communication defining traits. The result of the data interpretation by conventional content analysis is presented in Table 2.

Table 2

Iranian nursing student-patient therapeutic communication categories and corresponding codes

Number	Code	Subcategory	Category
1	Obtaining patients permission	Putting patient at the center of attention	A measure to deliver patient-centered care
2	Regarding patients' priorities		
3	Nursing student as an information recipient	Obtaining information regarding patients problems	
4	Guiding the communication process in the right direction		
5	Meeting patients' needs without delay	Providing care in a timely and responsible manner	
6	Not wasting time without purpose		
7	Having a sense of responsibility toward patients		
8	Not using scientific jargons	Apprehensible dialog	
9	Considering the patient's literacy level		
10	Patient's perception of nursing student's kindness	Empathy with respect for boundaries	Emotional companionship
11	Respecting for boundaries		
12	Showing patient that you understand his/her condition	Nursing student flexible behavior	
13	Using therapeutic touch		
14	Coping with different situations		

Table 2 *(continue)*

Number	Code	Subcategory	Category
15	Tolerance		
16	Patients preference for same gender nurse	Religious value effects	A phenomenon affected by values
17	Considering therapeutic communication as a religious duty		
18	Unconditional acceptance of patient	Cultural value effects	
19	Accepting students easily		
20	Patients adherence to education provided by nursing students		
21	Maintaining relationship as a duty	Professional value effects	
22	Professional code of ethics		

A Measure to Deliver Patient-Centered Care

The first category, "a measure to deliver patient-centered care," included four subcategories: "putting patient at the center of attention," "obtaining information regarding patients' problems," "providing care in a timely and responsible manner," and "apprehensible dialog."

Putting Patient at The Center of Attention. Nursing students should regard patients' preferences and ask for their permission before doing any intervention.

Some participants told the researcher about respecting the patient's wishes:

"*I am a vegetarian person. The nursing student hadn't known this point and supplied me with a diet plan full of red meat."* –Ayeshe

"*When I want to make patient's care plan, I should refer to patient, not the patient's kardex."*–Saied

"Students must honor the patient's preferences and wishes while providing care."–Sara

Some of the other participants told the interviewer regarding the importance of asking for clients' permission before providing care:

"*The nursing trainee wanted to take my blood sample when I was asleep. I woke up suddenly and pushed her away. The needle punctured student's hand.*" –Majed

"*When I want to take a new patient history, I ask the patient: May I ask you a few questions? After that, they answer my questions more easily.*" –Zahra

"*When students ask for patients' permission before doing any procedures, a relationship with trust is created between them and the patient cooperates with him/her.*" –Zinab

Obtaining Information Regarding Patients' Problems. Healthcare providers should determine patients' problems and educate patients to empower them to cooperate in their treatment. In this regard, one of the important roles of the nursing student is to act as an information recipient to arrive at a nursing diagnosis.

Some participants highlighted:

"*I want to tell my problems to the student calmly so that she/he solves my problems.*" –Majed

"*After performing a procedure, I ask patients how they feel in order to determine and resolve their problems.*" –Saied

"*Students should specify the patient's problems and provide them with necessary information about their disease and self-management. Patients should be involved in their care and make decisions for themselves.*" –Rahim

The other role of a nursing student which was mentioned by the study participants was to guide the communication process in the right direction by asking appropriate questions. Some of the participants stated,

"*When I wanted to tell the student about my groom, she asked me to explain her about my medications.*" –Ayeshe

"*It is not necessary to waste time for listening to patients problems which aren't related to the disease.*" –Zahra

"*Some of the patients are very talkative. You should guide the communication appropriately by asking questions which adjust the flow of communication.*" –Zinab

Providing Care in a Timely and Responsible Manner. Since patients who are not in stable condition need immediate care or response, nursing students should meet patients' needs and answer patients without wasting their time during apprenticeship.

Some participants stated as follows:

"*When I ask students a question about my heart medication, they shouldn't answer me an hour later.*" –Ahmed

"*I answer all patients alarm bell quickly, even when patient is in stable condition.*" –Samira

"*A pupil should respond patient as fast as a nurse. They shouldn't waste their time by playing with their cell phones.*" –Zinab

However, therapeutic communication is destroyed when nursing students show a lack of sense of responsibility. A patient told the researcher,

"*A nursing student took a blood sample from me and told my companion to take it to a laboratory outside of the hospital. But the student gave the wrong address to my brother. Therefore, he couldn't find the laboratory. When I told the nurse, she told me that the student had made a mistake. When he found the*

laboratory, it was closed. After that, I didn't accept trainee as a nurse any longer." –Ahmed

An instructor stated in this regard,

"The patient asked the trainee about her surgery. The student gave her wrong information. Fortunately, I corrected the trainee mistake and told her all the necessary information related to her treatment." –Zinab

Apprehensible Dialog. To establish an apprehensible dialog between a nursing student and the patient, the trainees should use simple and unscientific words based on patients' literacy level. Some of the participants told the researchers regarding selecting words during interactions:

"To have an effective communication with patient, it is important to use suitable and understandable words during interactions." –Ayeshe

"I don't educate patients with medical terms that I have learned in the nursing faculty. Using medical terms makes patients confused." –Samira

"The student explained about the test results to the patient. However, the patient did not understand because the nursing student used medical terms that were unclear to the patient." –Rahim

Some of the participants told the interviewer about the necessity of considering the patient's literacy level:

"Many patients are not educated. Students should educate us so that we can understand everything clearly." –Ahmed

"You should know about the patient's level of education. If he is illiterate, you should consider it from the start of interaction to educate him according to his level of understanding." –Sahar

"I always tell my trainees to ask patients regarding their literacy level during history taking." –Elham

Emotional Companionship

"Empathy with respect for boundaries" and "nursing student flexible behavior" subcategories formed the second category.

Empathy with Respect for Boundaries. Nursing students' ability to understand patient's condition and to convey this perception to the patient through kind therapeutic touch while respecting the common boundaries helps them to provide emotional support to patients. Some participants said in the interview:

"I was very nervous. I did not listen to student's words. She touched my hand and consoled me. Eventually, I calmed down and cooperated with her." –Efat

"When the patient perceives that I want to help him, he will cooperate with me." –Akbar

"A nursing student told her patient: I'm not your sister, but I can understand you

like my sister, ma'am. I understand that your physical condition is not good and you are hospitalized in this ward with high costs." –Saleh

Nursing Student Flexible Behavior. During therapeutic communication, nursing pupils should note that each patient has his own specific characteristics and problems. Also, the physical and emotional state of the patient may not be appropriate. Therefore, the nursing student should cope with the different physical and emotional states of the patients. Some participants highlighted,

> *"After the hospital's visiting times, my brother brought some required things for me. The nursing student told this point to the nurse and she allowed him to enter the ward."* –Sasan

> *"I always consider patients' conditions and problems carefully before responding to them."* –Samira

> *"The nursing student should have flexible reactions during therapeutic communication."* –Habib

As patients are sometimes bad-tempered, the nursing student should tolerate patients' sulkiness and try to calm them. Some participants told the researcher:

> *"When I spoke with the student in angriness, the nursing student soothed me with his kind words and calm behavior."* –Sasan

> *"I don't get angry because of bad behavior of sulky patients. I try to pacify*

them by keeping silence and using some relaxing words." –Saman

> *"Nursing trainees should keep their calmness and try to pacify their angry clients through using suitable words."* –Elham

A Phenomenon Affected by Values

The third category, "a phenomenon affected by values," included three subcategories, "religious value effects," "cultural value effects," and "professional value effects."

Religious Value Effects. A factor which has a deep effect on the Iranian nursing student-patient therapeutic communication is religious value. Patients preferred to communicate with a person of the same gender. Some participants said as follows:

> *"Iranian female patients prefer to be cared for by female healthcare providers. Also, male patients prefer to be cared for by male healthcare providers."* –Fatima

> *"I think that patients interact with the same gender healthcare providers more comfortably."* –Sahar

> *"I think these patients should have nurses from the same gender."* –Habib

Also, some participants mentioned therapeutic communication as a religious duty:

> *"I think that a student or personnel should interact with clients effectively*

as it is highlighted in our religion."
–Efat

"Whenever I interact with patients, I consider heaven as a result of my therapeutic communication." –Akbar

"It is highlighted in Islamic laws that a Muslim person should visit and create effective relationships with patients." –Sara

Cultural Value Effects. Cultural value is another factor that influences communication between nursing students and patients. Accepting the patient without prejudice helps nursing students to make a human connection with the patient. Some participants stated,

"I saw a nursing student who was telling her friend that Kurdish patients didn't have acceptable social behavior. Therefore, as a Kurdish patient, I didn't communicate with her because she was biased against Kurdish patients." –Fatima

"I am a novice nursing student. I look for a 'patient with the least physical and psychological problems' to establish therapeutic communication. Furthermore, I can't communicate with Turks. I don't like them and their accent." –Akbar

"Nursing trainees shouldn't have prejudice about patients with different cultures." –Sara

Because of Iranian culture, patients trust and accept their healthcare providers very easily. Some participants told the interviewer:

"I trust my healthcare providers and I act based on their orders and the education they provided." –Majed

"I always win the trust of patients and create relationship with them very easily." –Saied

"Most of the patients are commoners and they easily build trust in trainee as a healthcare provider." –Saleh

Professional Value Effects. Also, some students and instructors commented about the impact of professional value on therapeutic communication. According to nursing rules, both registered nurses and nursing pupils are required to perform effective communication. The statements are as follows:

"Therapeutic communication is considered as a professional duty in the rules of nursing profession; therefore, we should do it." –Zinab

"It is my responsibility to create an effective communication with the clients." –Sahar

"When two people communicate, both of them are in charge of communication. But in therapeutic communication between nursing student and patient, the task of establishing and preserving

communication is left to the student, not the patient." –Habib

Furthermore, two participants mentioned that they establish therapeutic communication based on nursing codes of ethics:

"I interact with patients according to ethical principles of nursing profession." –Saman

"Based on nursing ethical framework, students must observe their tone of voice and gestures while communicating with clients verbally and nonverbally." –Rahim

DISCUSSION

After analyzing the interviews by conventional content analysis, three categories were extracted, including "a measure to deliver patient-centered care," "emotional companionship," and "a phenomenon affected by values."

In the first category, participants highlighted that therapeutic communication helps nursing students to deliver patient-centered healthcare according to the patient's specific problems and preferences. In another study by Loghmani and colleagues (2014), nurses used therapeutic communication to educate patients' families and made them self-sufficient to guide all significant clinical decisions. This result is congruent with other studies that considered therapeutic communication as an important means of providing patient-centered care (Masters, 2017; Pereira et al., 2016) and suggest that the first and the best source for data gathering is the patient, not the Kardex or file (Levinson, 2011). Obtaining permission from patients is used by students as a strategy to build trust and connect with them. This may be a result of the culture of Iran, a country in Southeast Asia, which stresses on respecting patient as an individual and obtaining permission before initiating any procedure (Borhani et al., 2016). Also, it is necessary that the nursing student obtain the therapeutic data from the patient by asking them proper questions during communication. These questions help the nursing student stop patients' unnecessary stories and focus on the more important issues (Birks et al., 2015). Another study in Brazil by Damasceno and colleagues (2012) showed that healthcare providers used similar techniques, such as asking various questions and summarizing the conveyed content, to guide the flow of interaction which is similar to the present study (Damasceno et al., 2012). Nursing student should satisfy different patients' demands as quickly as possible. Therapeutic communication with the patient is considered as a soft and non-technical skill which helps nurses diagnose and manage patients' complications more confidently and without any delay (Massey et al., 2017). A high sense of responsibility is effective in motivating trainees to interact therapeutically with patients experiencing physical and mental complications (Rosenberg & Gallo-Silver, 2011; Sheldon

& Hilaire 2015). Nursing pupils should not spend their apprenticeship time without fulfilling educational objectives; establishing therapeutic communication is regarded as one of the most important of them. However, in another Iranian study, the educators were unable to instruct nursing students, and they just documented trainees' attendance due to a large number of nursing students. Furthermore, nurses did not educate students due to the weak relationship between nursing faculties and nurses in the educational hospital (Aein et al., 2010). Moreover, gathering data on patients' literacy levels helps nursing students forge effective relationships with patients (Koo et al., 2016). Sometimes healthcare providers communicate with patients using medical jargon. Therefore, patients cannot understand the conveyed messages effectively (Knapp et al., 2013). Similarly, in another study in Australia, patients could not understand healthcare providers' medical language and asked them to clarify the jargon (Schnitzler et al., 2017).

In the second category, participants hinted that using empathy while maintaining boundaries plays an important role in creating a therapeutic relationship. Empathy is defined as the ability to understand the patient condition and transferring this perception to the client so that he/she realizes the caregiver compassion. Other researchers stated that empathy skill helps students and patients build trust and connect with each other in a two-way interpersonal communication (Pereira et al., 2016; Ward et al., 2012). This finding is consistent with other research by MacDonald-Wicks and Levett-Jones (2012), which mentioned regarding the importance of empathizing with clients in forging therapeutic communication between trainees and their clients. Applying strategies such as showing kindness, using therapeutic touch, maintaining boundaries, and respecting patient privacy are the principles of fostering trust in patients while delivering professional care (Birks et al., 2015; Rosenberg & Gallo-Silver, 2011). Furthermore, the nursing trainee should have a flexible behavior in front of the patient, who is suffering from physical and psychological effects of the disease as well as the emotional and financial burden of hospitalization. This point is of great importance especially during communication with patients who have had long and recurrent hospitalizations due to chronic illness (Komatsu & Yagasaki, 2014). Also, Iranian nursing students tolerate the patients' moodiness and outbursts and try to maintain their calmness during interactions. They do not retaliate against patient's undesirable words and behaviors with angry tone and harsh words since it leads to worse arguments. They use strategies such as keeping silence and expressing relaxing phrases to calm down the angry patient, especially in psychiatric wards. Also, in another Iranian study, it was reported that Iranian nurses use the same strategies and they do not report inappropriate patient actions to superior authorities even in cases of verbal and physical abuse (Hemmati Esmaeili et al., 2015).

The last category highlights that therapeutic communication is influenced by religious, cultural and professional values of Iranian nursing context. Islam has influenced various aspects of Iranian life, including communication. Because Islamic laws recommend gender separation, most Iranians prefer to be cared for by nurses of the same gender. Martin and colleagues (2016) stated that even immigrant Muslim patients had this preference in non-Muslim countries. This tendency among patients is supported by the Iranian government policy, which motivates the recruitment of men into nursing (Zamanzadeh et al., 2013). Furthermore, some participants mentioned that they interact with patients for a heavenly reward. In this regard, in another research in Iran, nurses who considered therapeutic communication as a religious duty were more successful in establishing effective relationships with clients (Loghmani et al., 2014). This result is similar to those of other studies conducted in India and Iran, where contextual factors, such as culture and religion, strongly affect the process of establishing a relationship and the interpretation of messages (Imran, 2013; Marhamati et al., 2016; Norouzinia et al., 2015).

In Iran, which is a Shiite Muslim country, the nursing profession is regarded as a holy job (Alimohammadi et al., 2013). Thus, biases against Iranian nurses are low in comparison with other Middle Eastern countries, where nursing is considered a job for low-status and poor women (Haghighat, 2013). Therefore, patients accept and trust nursing students, but nursing trainees destroy this trust with their neglects and mistakes which is similar to those of a report about the medication errors of nurses in United Kingdom (Haw et al., 2014). As there are different ethnicities with various cultural backgrounds in Iran, such as Lur, Turk, Kurd, Baloch, and Arab, it is of great importance that nursing students accept patients unconditionally (Norouzinia et al., 2015). However, it is acceptable for novice trainees to choose a desirable patient. Having an own-race patient, who is in stable physical and psychological condition, provides students with a good opportunity for learning by practice in simple cases (Medical College of Wisconsin, 2015). This result is congruent with another qualitative study conducted in Turkey, where nursing students needed more preparation to provide cross-cultural care to Turkish and Kurdish patients (Karatay et al., 2016). However, as students improve their professional competencies, they should learn to accept patients in unstable conditions, even those with different ethnic characteristics, and create therapeutic communication with them (Khaghanizade et al., 2014).

Therapeutic communication is not like the social relationship between two ordinary people in which both of them have a balanced role in creating a relationship. Nursing students should consider therapeutic communication as their professional duty and work hard to establish and maintain effective relationships with hospitalized patients (Kourkouta & Papathanasiou, 2014). The Joint Commission on Accreditation of

Healthcare Organizations has determined therapeutic communication to be one of the most fundamental requirements for nurses to provide scientific and safe nursing care to patients in different settings (Shafakhah et al., 2015). Also, nursing trainees need to assess the patient, develop a nursing diagnosis, design a nursing care plan, and provide patient education to complete their clinical assignments (Khaghanizade et al., 2014). Therefore, nursing student seeing himself/herself as the person in charge of communication, re-connect with patients even after arguments (Alligood, 2014; Damasceno et al., 2012; Rosenberg & Gallo-Silver, 2011). Nursing codes of ethics, an essential component of nursing professional standards with a strong effect on therapeutic communication, includes important concepts such as respecting patients dignity, receiving patient consent, and keeping patient confidentiality (Parsapoor et al., 2013). Also, Jean Watson, a well-known nurse theorist, had dealt with the concept of ethical value as a facilitator of nurse-patient interpersonal communication in her theory of human caring. According to this researcher, performing verbal and nonverbal communication based on ethical values was a professional goal to help humans, as spiritual, religious, emotional, psychological, and physical beings, to heal and live in harmony (Alligood, 2014).

CONCLUSION

The results of this study demonstrate the most important defining traits of nursing student-patient therapeutic communication.

Furthermore, these results highlight three more aspects: the necessity of focusing more on therapeutic communication instruction by educators and nurses, recruiting more men into the nursing profession, and removing barriers to retaining male nurses to establish healthcare provider and patient gender congruence. Further studies may explore the impact of simulation on improving novice nursing students' therapeutic communication with patients.

REFERENCES

Aein, F., Alhani, F., & Anoosheh, M. (2010). The experiences of nursing students, instructors, and hospital administrators of nursing clerkship. *Iranian Journal of Medical Education*, *9*(3), 191-200.

Alimohammadi, N., Taleghani, F., Mohammadi, E., & Akbarian, R. (2013). Nursing in Islamic thought: Reflection on application nursing metaparadigm concept: A philosophical inquiry. *Iranian Journal of Nursing and Midwifery Research*, *18*(4), 272-279.

Alligood, M. R. (2014). *Nursing theorists and their work*. St. Louis, MA: Elsevier Mosby.

Baghcheghi, N., Koohestani, H. R., & Rezaei, K. (2011). A comparison of the cooperative learning and traditional learning methods in theory classes on nursing students' communication skill with patients at clinical settings. *Nurse Education Today*, *31*(8), 877-882.

Birks, M., Chapman, Y. B., & Davis, J. (2015). *Professional and therapeutic communication*. South Melbourne, Vic.: Oxford University Press.

Borhani, F., Abbaszadeh, A., & Rabori, R. M. (2016). Facilitators and threats to the patient dignity in hospitalized patients with heart diseases: A qualitative study. *International Journal of*

Community Based Nursing and Midwifery, *4*(1), 36-46.

Claramita, M., Tuah, R., Riskione, P., Prabandari, Y. S., & Effendy, C. (2016). Comparison of communication skills between trained and untrained students using a culturally sensitive nurse–client communication guideline in Indonesia. *Nurse Education Today*, 36, 236-241.

Damasceno, M. M., Zanetti, M. L., de Carvalho, E. C., Teixeira, C. R., de Araújo, M. F., & Alencar, A. M. (2012). Therapeutic communication between health workers and patients concerning diabetes mellitus care. *Revista Latino-americana de Enfermagem*, *20*(4), 685-692.

de Lima, I. C., Galvão, M. T., Costa, Ê., Freitas, J. G., & Freitag, L. M. (2011). Communication between nursing students and patients with Aids. *Revista da Escola de Enfermagem da USP*, *45*(2),426-432.

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative content analysis: A focus on trustworthiness. *Sage Open*, 4(1), 1-10.

Haghighat, E. (2013). Social status and change: The question of access to resources and women's empowerment in the Middle East and North Africa. *Journal of International Women's Studies*, *14*(1), 273-299.

Haw, C., Stubbs, J., & Dickens, G. L. (2014). Barriers to the reporting of medication administration errors and near misses: An interview study of nurses at a psychiatric hospital. *Journal of Psychiatric and Mental Health Nursing*, *21*(9), 797-805.

Heath, R. L., & Bryant, J. (2013). *Human communication theory and research: Concepts, contexts, and challenges*. New York, NY: Routledge.

Heidari, H., & Mardani Hamooleh, M. (2015). Improving communication skills in clinical education of nursing students. *Journal of Client-Centered Nursing Care*, *1*(2), 77-82.

Hemmati Esmaeili, M., Heshmati Nabavi, F., & Reihani, H. R. (2015). Evaluation of violence of patients and their families against emergency nurses of Imam Reza Central Hospital in Mashhad. *Iranian Journal of Critical Care Nursing*, *7*(4), 227-236.

Imran, S. (2013). Evaluation of communication skills training program for nursing students to develop supportive ward atmosphere during care of patients with cancer. *International Journal of Nursing Education*, *5*(1), 222-227.

Jamshidi, N., Molazem, Z., Sharif, F., Torabizadeh, C., & Najafi Kalyani, M. (2016). The challenges of nursing students in the clinical learning environment: A qualitative study. *The Scientific World Journal*. Retrieved on April 14, 2017, from https://www.hindawi.com/journals/tswj/2016/1846178/.

Johnston, J., Fidelia, L., Robinson, K.W., Killion, J. B., & Behrens, P. (2012). An instrument for assessing communication skills of healthcare and human services students. *Internet Journal of Allied Health Sciences and Practice*, *10*(4), 1- 6.

Jouzi, M., Vanaki, Z., & Mohammadi, E. (2015). Factors affecting the communication competence in Iranian nursing students: A qualitative study. *Iranian Red Crescent Medical Journal*, *17*(3), 1-9.

Karatay, G., Bowers, B., Karadağ, E. B., & Demir, M. C. (2016). Cultural perceptions and clinical experiences of nursing students in Eastern Turkey. *International Nursing Review*, *63*(4), 547-554.

Khaghanizade, M., Ebadi, A., & Javaher, A. A. (2014). Designing and psychometrics of nursing

students' communication skills questionnaire. *Advances in Environmental Biology*, 787-792.

Kiani, F., Balouchi, A., & Shahsavani, A. (2016). Investigation of nursing students' verbal communication quality during patients' education in Zahedan hospitals: Southeast of Iran. *Global Journal of Health Science*, *8*(9), 331-336.

Knapp, M. L., Hall, J. A., & Horgan, T. G. (2013). *Nonverbal communication in human interaction* (8th ed.). Boston, MA: Wadsworth, Cengage Learning.

Komatsu, H., & Yagasaki, K. (2014). The power of nursing: Guiding patients through a journey of uncertainty. *European Journal of Oncology Nursing*, *18*(4), 419-424.

Koo, L. W., Horowitz, A. M., Radice, S. D., Wang, M. Q., & Kleinman, D.V. (2016). Nurse practitioners' use of communication techniques: Results of a Maryland oral health literacy survey. *PloS One*, *11*(1), e0146545.

Kourkouta, L., & Papathanasiou, I. V. (2014). Communication in nursing practice. *Materia Socio-medica*, *26*(1), 65-67.

Levinson, W. (2011). Patient-centred communication: A sophisticated procedure. *BMJ Quality and Safety*, *20*(10), 823-825.

Loghmani, L., Borhani, F., & Abbaszadeh, A. (2014). Factors affecting the nurse-patients' family communication in intensive care unit of Kerman: A qualitative study. *Journal of Caring Sciences*, *3*(1), 67-82.

MacDonald-Wicks, L., & Levett-Jones, T. (2012). Effective teaching of communication to health professional undergraduate and postgraduate students: A systematic review. *JBI Library of Systematic Reviews*, *10*(28), 1-12.

Marhamati, S., Amini, M., Mousavinezhad, H., & Nabeiei, P. (2016). Design and validating the nurse-patient communication skills

questionnaire. *Journal of Health Management and Informatics*, *3*(2), 57-63.

Martin, M. L., Heron, S. L., Moreno-Walton, L., & Jones, A.W. (2016). *Diversity and inclusion in quality patient care*. Switzerland: Springer International Publishing.

Massey, D., Chaboyer, W., & Anderson, V. (2017). What factors influence ward nurses' recognition of and response to patient deterioration? An integrative review of the literature. *Nursing Open*, *4*(1), 6–23.

Masters, K. (2015). *Role development in professional nursing practice* (4th ed.). Burlington, MA: Jones & Bartlett Learning.

Medical College of Wisconsin. (2015). *Teams collaborative: Teaching early ambulatory medical students*. Milwaukee, WI: Medical College of Wisconsin. Retrieved on April 10, 2017, from: http://www.mcw.edu/ FileLibrary/User/facdev/Infographic-onepager912015.pdf

Norouzinia, R., Aghabarari, M., Shiri, M., Karimi, M., & Samami, E. (2015). Communication barriers perceived by nurses and patients. *Global Journal of Health Science, 8*(6), 65-74.

Parsapoor, A. R., Salari, P., & Larijani, B. (2013). Implementation of patient's rights charter: A report from Ministry of health and medical education, Iran. *Iranian Journal of Public Health*, 42(Supple1), 9-12.

Pereira, L., Figueiredo-Braga, M., & Carvalho, I. P. (2016). Preoperative anxiety in ambulatory surgery: The impact of an empathic patient-centered approach on psychological and clinical outcomes. *Patient Education and Counseling*, *99*(5), 733-738.

Polit, D. F., & Beck, C. T. (2014). *Essentials of nursing research: Appraising evidence for nursing practice* (8th ed.). Philadelphia, PA:

Wolters Kluwer/Lippincott/Williams & Wilkins Health.

Rosenberg, S., & Gallo-Silver, L. (2011). Therapeutic communication skills and student nurses in the clinical setting. *Teaching and Learning in Nursing*, *6*(1), 2-8.

Schnitzler, L., Smith, S. K., Shepherd, H. L., Shaw, J., Dong, S., Carpenter, D. M., Nguyen, F., & Dhillon, H. M. (2017). Communication during radiation therapy education sessions: The role of medical jargon and emotional support in clarifying patient confusion. *Patient Education and Counseling*, 100(1), 112-120.

Shafakhah, M., Zarshenas, L., Sharif, F., & Sabet Sarvestani, R. (2015). Evaluation of nursing students' communication abilities in clinical courses in hospitals. *Global Journal of Health Science*, *7*(4), 323-328.

Sheldon, L. K., & Hilaire, D. M. (2015). Development of communication skills in healthcare: Perspectives of new graduates of undergraduate nursing education. *Journal of Nursing Education and Practice*, 5(7), 30-37.

Street Jr, R. L. (2013). How clinician–patient communication contributes to health improvement: Modeling pathways from talk to outcome. *Patient Education and Counseling*, *92*(3), 286-291.

Suikkala, A., & Leino-Kilpi, H. (2005). Nursing student–patient relationship: Experiences of students and patients. *Nurse Education Today*, *25*(5), 344-354.

Graneheim, U. H., Lindgren, B. M., & Lundman, B. (2017). Methodological challenges in qualitative content analysis: A discussion paper. *Nurse Education Today*, *56*, 29-34.

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, 15(3), 398-405.

Ward, J., Cody, J., Schaal, M., & Hojat, M. (2012). The empathy enigma: An empirical study of decline in empathy among qundergraduate nursing students. *Journal of Professional Nursing*, *28*(1), 34-40.

Zahedi, F., Sanjari, M., Aala, M., Peymani, M., Aramesh, K., Parsapour, A., Maddah, S. B., Cheraghi, M., Mirzabeigi, G., Larijani, B., & Dastgerdi, M. V. (2013). The code of ethics for nurses. *Iranian Journal of Public Health*, *42*(Supple 1), 1-8.

Zamanzadeh, V., Valizadeh, L., Negarandeh, R., Monadi, M., & Azadi, A. (2013). Factors influencing men entering the nursing profession, and understanding the challenges faced by them: Iranian and developed countries' perspectives. *Nursing and Midwifery Studies*, *2*(4), 49-56.

Enforcement of Trademark Law in Malaysia

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ABSTRACT

Enforcement of trademark Law in Malaysia can be categorized as per Part III of Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of World Trade Organization (WTO) into (i) civil procedure, (ii) criminal procedure, (iii) administrative procedure, (iv) provisional measures, and (v) border measures. Important trademark International Treaties dealing with trademark include (i) Paris Convention (ii) TRIPS (iii) Madrid Protocol. Malaysia has ratified Paris Convention and TRIPS but has not ratified Madrid Protocol which provides procedure for International Trademark registration under International Bureau of World Intellectual Property Organization (WIPO). Once trademark registration is made under Madrid Protocol in one-member state, it would be protected in all member states. Important Malaysian trademark laws dealing with enforcement of trademark in Malaysia include (i) Trade Marks Act 1976 (ii) Trade Marks Regulations 1997 (iii) Intellectual Property Corporation of Malaysia Act 2002 (iv) Trade Descriptions Act 2011. This article is qualitative method of research to analyze enforcement of trademark law in Malaysia under relevant Malaysian laws as well as analysis of relevant International Treaties of trademark solemnized under WIPO and WTO. Paris Convention contains provisions on trademark and its enforcement dealing with Border Measures and TRIPS include comprehensive provisions on trademark (15-21) and enforcement of trademark (41-61) as Madrid Protocol provides procedure for International Trademark registration. Malaysia has ratified Paris Convention and TRIPS but has not ratified Madrid Protocol. It is therefore recommended that Malaysian government should accede to Madrid

Protocol for protection of trademarks registered in Malaysia to be protected in 98-member countries of Madrid Protocol.

INTRODUCTION

Trademark is mark, name, sign, smell or a sound which distinguishes goods/services of one undertaking from goods/services of other undertakings. Trademark is required to be distinctive and non-descriptive; it loses its distinctiveness when registered owner of trademark does not take prompt action against its infringement. Enforcement procedures of trademark can be categorized as per Part III of TRIPS into (i) civil procedure, (ii) provisional measures, (iii) administrative procedure, (iv) border measures, and (iii) criminal procedure. Intellectual Property Corporation of Malaysia (MyIPO) has been working for registration and protection of trademarks in Malaysia. There is no separate body for trademark registration and protection hence it is required to have a separate body like United States Patent and Trademark Office (USPTO) for registration and protection of trademarks in Malaysia.

Trade Marks Ordinance 1950 is repealed by Trade Marks Act 1976 and thereunder Trade Marks Regulations 1997 prescribed and applies on whole Malaysian territory. MyIPO established and works under Intellectual Property Corporation of Malaysia Act 2002. MyIPO Headquarter is in Kuala Lumpur and regional offices are in (i) Sabah (ii) Sarawak (iii) Johor Bahru (iv) Kuantan (v) Penang and (vi) Melaka. All regional offices receive trademark registration applications as the register of trademark is kept at the Headquarter. Trademark registration application with required documents may be (i) submitted by hand or (ii) send to the Registrar by post or (iii) submitted online through electronic means. All trademark entries are required to include (i) name, details and address of the proprietor (ii) name, details and address of the registered user (iii) assignment and transmission record (iv) disclaimers, conditions and limitations.

Trade Marks Regulations are made in 1997 to (i) regulate trademark practices before the Registrar of trademark (ii) classify goods and services prescribed in third schedule same as prescribed in Nice Agreement 1957 and Vienna Agreement 1973 (34 classes of goods and 11 classes of services) (iii) make or require duplication of documents to secure and regulate publishing (iv) prescribe fee (v) regulate other matters dealing with trademark (vi) make qualification of an agent who must be (a) domiciled or resident of Malaysia (b) has a principal place of business in Malaysia (c) an advocate or a solicitor in Malaysia (d) holds a recognized degree in Industrial Property and has over 3 years of experience. The agent may be removed from the register of trademark if he (a) loses prescribed qualification (b) convicted (c) declared discharged bankrupt.

Trade Descriptions Act 1972 is repealed by Trade Descriptions Act 2011 to promote good trade practices and prohibit false trade description, advertisement, conducts and practices including trademark infringement. Investigation of false trade description offences is required to be conducted by Controller/Assistant Controller/Deputy Controller appointed by the Federal Minister of Domestic Trade, Cooperatives and Consumerism.

WIPO and WTO are two main International Organizations currently work for promotion and protection of IP including trademark throughout the world. WIPO has Paris Convention and Madrid Protocol dealing with trademark, its registration and enforcement. Paris Convention is the first International Treaty contains provisions on enforcement of IP dealing with Border Measures in member states of WIPO as TRIPS contains comprehensive Part III dealing with enforcement of IP in member countries of WTO. TRIPS Part III includes provisions dealing with (i) general obligations, (ii) civil procedure, (iii) administrative procedure, (iv) provisional measures, (v) border measures, and (vi) criminal procedure of trademark enforcement. Madrid Protocol deals with International Trademark registration which has not been ratified by Malaysia. It is therefore recommended that Malaysia should accede to Madrid Protocol so that trademark registration in Malaysia under International Bureau of WIPO would be protected in 98-member states of Madrid Protocol.

Trademark

Trademark is mark capable to distinguish goods/services of one undertaking from goods/services of other undertakings. (Bryer, Lebson, & Asbell, 2011) Intended use and nature of goods/services would not be obstacle in registration of trademark in member countries. Publication would take place before or after registration and if party fails to maintain usage for continuous 3 years, registration would be cancelled (Bodenhausen, 1968). The owner of trademark may assign trademark with or without transferring his whole business with it. Term of protection for registered trademark would be at least for 7 years and renewable indefinitely after expiration of initial time (Articles 16-21 "Agreement on Trade Related Aspects of Intellectual Property Rights" 1994).

Trademark includes device, brand, heading, label, ticket, name, signature, word, letter, numeral or any combination. It also includes well-known mark in respect of goods/services.(Blakeney, 1996) When deciding authority of well-known mark, the Registrar is required to take into account (i) knowledge and recognition of mark in relevant sector, (ii) duration, extent and geographical area of use, (iii) promotion, advertisement, publicity and presentation of goods/services, (iv) successful enforcement record of the mark, and (v) value associated with the mark (Regulation 13B "Trade Marks Regulations," 1997). Trade names and Service marks are protected under Paris Convention in member countries of the

union (Articles 6,9 "Paris Convention for the Protection of Industrial Property" 1967).

Interested party may make an application of trademark registration (i) by hand, (ii) by post, or (iii) online for the registration of trademark before MyIPO in Malaysia. The Registrar would accept or reject application and if he refuses application or accepts conditionally he would give grounds. The aggrieved party may apply before the Court against decision of the Registrar (Intellectual Property Corporation of Malaysia [MyIPO], 2016). Grounds for rejection of trademark application would be taken into consideration as prescribed under Trade Marks Act 1976 if applied trademark is (i) contrary to law, (ii) deceives or causes confusion, (iii) consists scandalous or offensive matter, (iv) prohibited to be protected by the Court, (v) against interest and security of nation, (vi) identical to well-known mark, (vii) identical with already registered mark, (viii) consists misleading thing of its origin except (a) applied in good faith, (b) geographical indication which ceased to be protected, (c) contains words: patent, patented, by royal letters patent, registered, registered design and copyright. (Sections 14,15,19 "Trade Marks Act," 1976) Paris Convention also states grounds of trademark rejection including (ix) trademark identical to state official signs or Intergovernmental Organizations, (x) infringes rights acquired by third parties, (xi) does not have distinct character, (xii) contrary to morality and public order, (xiii) deceives public at large, and (xiv) against

public interest. (Article 6 "Paris Convention for the Protection of Industrial Property" 1967)

If application of trademark registration is made for registration of another person's name, that person's consent is required for the registration if he is alive otherwise his legal representative may give consent for the registration of trademark. If trademark is registered but not of a distinctive nature and common to trade and business and contains any part which is not separately registered, the Registrar or the Court may require the owner to disclaim some exclusive rights granted to him and that disclaimer would be recorded in the register of trademark. (Section 16 "Trade Marks Act" 1976)

If proposed user of trademark does not begin its business within 6 months, the Registrar is required to cancel his registration. If applicant does not fulfill requirements of trademark registration within 12 months, the Registrar is prescribed to abandon his application after observing right of notice except matter is pending before the Court or not more than 3 months have passed after decision of the Court. (Section 29 "Trade Marks Act" 1976)

The registered owner of trademark may authorize any person to be registered user of his trademark in respect to all or any of the registered goods/services but the owner retains exercise control of quality. The owner of trademark may apply for trademark registration through prescribed application consisting (i) representation of trademark, (ii) name and address of contracting parties,

(iii) description of goods/services, (iv) any condition or restriction, and (v) whether usage is for a limited time or unlimited time. If the registered user feels that the owner is making hurdles in usage, he may apply in the Court for relief. The registered user may call upon the registered proprietor to start infringement proceedings within 2 months otherwise the registered user may start proceedings with his own name as the registered proprietor and make the proprietor defendant. The registered user of trademark does not have right of assignment and transmission under Trade Marks Act 1976. (Sections 51,52 "Trade Marks Act" 1976)

Protection time of registered trademark is 10 years in Malaysia under section 32 of Trade Marks Act 1976 which is renewable after expiration for further 10 years under section 41 of Trade Marks Act 1976. The Registrar may send a notice to the prescribed owner of trademark before expiration of protection time consisting (i) date of expiration, and (ii) conditions of extension. The renewal of trademark can be granted for further 10 years if the owner applies in a prescribed manner within a prescribed time and fulfills prescribed conditions (Section 41(1) " Trade Marks Act," 1976). As per article 18 of TRIPS, the term of protection for the registered trademark is at least for 7 years and renewable afterwards indefinitely. It is suggested that the word "indefinitely" should be added in section 32 of Trade Marks Act 1976 after words "from time to time" for clarity. The right of priority can be claimed within 6 months in Malaysia

as it is one of the member states of Paris Convention. Temporary protection can be granted to trademark goods/services that are subject matter of International Exhibitions and right of priority can also be claimed upon temporary protected trademarks within 6 months from the date of first exhibition day. (Sections 70,70A "Trade Marks Act" 1976)

Malaysia has ratified Paris Convention and TRIPS but has not ratified Madrid Protocol. Madrid Protocol is one of the treaties of WIPO made to protect International Trademarks in 98-member states signatories of Madrid Protocol. Initially Madrid Agreement concerning International Registration of trademarks entered force in 1891 which established Madrid System known as International Trademark System (Leaffer, 1998). Madrid Protocol came into being in 1989 and it overtook Madrid Agreement as of September 1 2008 and on October 11 2016 Madrid Union Assembly decided to freeze accessions to Madrid Agreement thus all members now benefit from flexibilities and features of Madrid Protocol. Signatories of Madrid Protocol include United States of America (USA) and European Union (EU) (Dutfield, G., & Suthersanen, U., 2008; Leaffer, 1998).

Entries of International Trademark registration are protected for 10 years from the date of registration and renewable after its expiration for further 10 years and International Bureau (IB) is required to contact right holder 6 months prior to expiry of protection time of 10 years. IB

is required to record name and address of trademark owner and his representative as well as limitation, renunciation, cancellation and invalidation of International Trademark registration which are also required to be recorded in International Register of IB (Roth, 2014; Samuels, 1993).

Malaysia has not ratified Madrid Protocol yet, it is therefore highly recommended that Madrid Protocol should be ratified by Malaysia by following footsteps of USA and EU to accede to Madrid Protocol and amend trademark law as per Madrid Protocol after its accession to give effect provisions of Madrid Protocol for recognition and enforcement of International Trademarks in Malaysia.

Enforcement of Trademark

Part III of TRIPS deals with enforcement of IP rights in member states of WTO under articles 41-61. TRIPS require all member states to follow enforcement procedures prescribed under Part III in their countries to prevent infringement as well as to provide adequate remedies. Enforcement procedures must be (i) fair, (ii) adequate, (iii) expedient, (iv) equitable, and (v) must not be complicated (vi) costly and time consuming. Member states of WTO must allow trademark right holder to take legal action against infringement of his IP right to stop existing infringement as well as to prevent infringement in future and to recover losses beard by him. Member states must put in place effective enforcement procedures and deterrent remedies as well as to empower competent authorities to take

actions. (Article 41-61 "Agreement on Trade Related Aspects of Intellectual Property Rights" 1994)

Enforcement of IP right is one of the parts of enforcement of law in general and there is no requirement to separate them and to create special resources for enforcement of IP rights. Legitimate trade is required to be encouraged through adequate procedures of enforcement by discouraging abuse against it. TRIPS do not affect enforcement capacity of member states in their general domestic law. It is not obligatory upon member states to deal with enforcement of TRIPS separately by redistributing resources as it is enforcement of domestic law in general. (Taubman, 2011)

Fundamental principle of IP enforcement is to maximize national interests by assessing current rules of economics which should be amended to minimize derivation from socially optimal targets and to provide guidance for formulating National Policy on IP rights' enforcement. Developing countries of WTO have their personal agenda and personal interests on enforcement of IP rights. Member states (163) of WTO have taken an initiative for smooth implementation of trademark rights but have flaws in their agenda, therefore developing countries are required to put more efforts identifying and pursuing their positive interests in enforcement of IP rights as per Part III of TRIPS. (Xuan Li & Correa, 2009)

Enforcement of IP procedures include (i) civil procedure, (ii) provisional measures, (iii) administrative procedure, (iv) border

measures, and (v) criminal procedure. IP enforcement procedures must not be complicated and time consuming and must be based upon due process of law and fair trial which are basic requirements needs to be complied with by member states of TRIPS under article 41. Enforcement procedures of trademark in Malaysia under the light of relevant International Treaties and trademark laws of Malaysia are discussed hereunder.

Civil Procedure

TRIPS contain articles 42-49 in Part III dealing with civil procedure of trademark enforcement in member countries of WTO. Member states of WTO must provide opportunity of civil proceedings to right holder and defendant has right of notice before legal proceedings which must be made within a suitable time and contains adequate details based on claim. Personal appearances of parties must not be obligatory and they may be represented through independent lawyers and present evidences (Yu, 2011). Member states are required to protect trade of imported goods by preventing infringement of IP and infringer is required to pay damages to right holder as compensation for injury caused due to infringement and he may also be required to pay expenses of attorney's fee and profits which he generated due to infringement (Yu, 2009). Infringed goods may be disposed-off or destroyed without causing injury to the right holder if it is not contrary to provisions of the Constitution of member state. (Articles 42-49"Agreement on Trade

Related Aspects of Intellectual Property Rights" 1994)

Aggrieved party may adopt civil procedure before Civil Court in Malaysia against wrong entry in the register of trademark which remains there without sufficient cause. The Registrar may apply before the Court against assignment, transmission or registration of trademark. The Court if decides in favor of plaintiff issues notice to the Registrar to rectify the register of trademark. Trademark can be removed on order of the Court if trademark is registered in bad faith or if it has not been in use for continuous 3 years. The Registrar of trademark may be asked by the Court to submit similar nature cases presented before him and that can be taken as evidence in civil proceedings. The Court may order all expenses, charges and costs in favor of the registered trademark owner. (Sections 41-45, 61-63"Trade Marks Act" 1976)

Section 51 of Trade Marks Act 1976 states that registered user is entitled to call upon registered proprietor to start civil proceedings of trademark infringement and if the registered proprietor refuses or neglects to do so within 2 months after being so called upon, the registered user may institute civil proceedings of trademark infringement with in his own name as he was the registered proprietor and shall make the registered proprietor defendant but the registered proprietor added as defendant would not be liable to pay costs unless he enters, appears and takes part in trademark infringement proceedings. ("Trade Marks Act" 1976)

In the case of *Oriental Motolite Marketing Corporation v Syarikat Asia Bateri*, plaintiff Oriental & Motolite Marketing is a company in Philippines to produce automotive batteries and trading it with trademark "MOTILITE" since 1950. Plaintiff Oriental Motolite Marketing Corporation has been selling its products in Malaysia through defendant Syarikat Asia Bateri since 2000. Both parties signed deed of assignment by which all rights and interests of defendant in "MOTIOLITE" trademark assigned to plaintiff and signed memorandum of understanding by which defendant is appointed as local distributor of plaintiff in Malaysia for 5 years and continue to be in his position if distributorship agreement is signed afterwards between them but it was not solemnized and defendant continued to distribute batteries with trademark "MOTIOLITE" hence Plaintiff filed civil suit of trademark infringement before the Court where trademark infringement claim proved in his favor with costs. ("*Oriental & Motolite Marketing Corp v Syarikat Asia Bateri Sdn Bhd*" (2012) 5 MLJ 87)

Section 38 of Trade Marks Act 1976 states that registered trademark is infringed when it is used by a person who is not the registered proprietor/user and does not use it by way of permitted use, uses trademark which is identical with or so nearly resembles as it likely to deceive or cause confusion during trade in relation to goods/services in respect of which trademark is registered. Infringement of trademark occurs when infringer uses identical trademark as registered trademark upon goods/services in physical relation thereto in an advertising circular in other advertisement issues to public. ("Trade Marks Act" 1976)

In the case of *PELITA Samruda Pertama v Venkatasamy a/1 Sumathiri*, appellant PELITA is the owner of hotel and has right to sell food and related things at its premises under trademark PELITA as well as PELITA oil lamp a common-law trademark which is protected under Paris Convention. The Respondent Venkatasamy applied for registration of same trademark PELITA before the Registrar of trademark. The owner of PELITA replied on application of respondent before the Registrar of trademark that he already has ownership of trademark PELITA, but the Registrar rejected his contention and registered subsequent application of PELITA in favor of respondent. Appellant filed appeal before the High Court against decision of the Registrar and contended that registration of subsequent trademark PELITA causes confusion and deception at market place and damages goodwill and reputation of appellant. The High Court held that this case was a clear-cut case of common law mark protection under International Convention and Malaysia was a common-law country thus case was decided in favor of appellant with costs RM 10.000 and the Registrar was directed to expunge entry of respondent from trademark register. ("*PELITA Samudra Pertama (M) Sdn Bhd v Venkatasamy a/l Sumathiri* " (2012) 6 MLJ 114)

Section 40 of Trade Marks Act 1976 states that infringement does not occur if there is (i) use of own name or name of business place in good faith, (ii) use by a person describing character and quality of goods/services in good faith, (iii) use of trademark for business for an immemorial time, (iv) part use of trademark with prior permission of trademark proprietor/user, (v) use of trademark necessary to indicate fact that goods/services are adopted, and (vi) use of trademark which is serious of registered identical trademarks. (Moscato-Wolter, 2016)

In the case of *Shaifubahrim Bin Mohd v EM Exhinitions,* plaintiff Shaifubahrim bin Mohammad is president of PIKOM appointed defendant as project executive in his company. Later, defendant left company and set up his own company PC EXPO for organization of computer related exhibitions. Plaintiff filed claim before the Court that defendant was using its registered trademark PC FAIR. The Court held that PC FAIR was common term for computer related exhibitions as registered. Legalized term with the name of plaintiff was PIKOM PC FAIR and not PC FAIR. ("*Shaifubahrim Bin Mohd v EM Exhibitions (M) Sdn Bhd & Anor*" (2012) 9 MLJ 84)

The Court in Malaysia may order all expenses, charges and costs in favor of trademark owner, but the Registrar cannot be ordered to pay costs. The Registrar of trademark is empowered to take evidences through declaration or through viva voce examination and those evidences may be used in the Court through an affidavit as well as copies of original work sealed by the Registrar and Certificate issued by the Registrar are admissible evidences before the Court. Foreign document is admissible evidence if document is sealed by the authorized officer or foreign government or if certificate issued by the authorized officer on validity of document. Foreign state is under reciprocal agreement with the Government of Malaysia to accept documents but this does not mean that Malaysian Government is bound to accept and recognize all foreign trademarks. (Sections 64-66"Trade Marks Act" 1976)

Section 82 of Trade Marks Act 1976 states that no person is entitled to initiate any action to prevent or to recover damages for infringement of his unregistered trademark except right of action against any person for passing off goods/service of another and remedies in respect thereof (Conlon, 1975). In the case of *Plastech Industrial Systems v N & C Resources*, plaintiff Plastech Industrial System is manufacturer of plastic foam and defendant N & C Resources is also manufacturing plastic products. Defendants 2, 3 and 4 left plaintiffs and joined defendant N & C Resources in 2009. Defendants used confidential information of plaintiff for making similar kind of products and trading it at market place. Plaintiff filed claim of infringement and passing off. The Court held that act of defendants might damage goodwill of plaintiff by loss of sale at market place hence it was a clear-cut case of passing off in favor of plaintiff. ("*Plastech Industrial Systems Sdn Bhd v N & C Resources Sdn Bhd & Ors*" (2012) 5 MLJ 258)

The Registrar of trademark may be ordered by the Court to give his advice on trademark whether it is distinguishable or not and person asked for advice may on negative advice of the Registrar may withdraw his application of registration with fee reimbursed (Section 73"Trade Marks Act" 1976). Appeal against decision of the Registrar lies before the High Court in Malaysia but decision of the Registrar is not appealable except if an appeal is given under Trade Marks Act 1976. The Court has power of review on all orders of the Registrar passed related to entry in question or correction and the Court enjoys all powers given to the Registrar under Trade Marks Act 1976 in an appeal upon decision of the Registrar. (Sections 67-69"Trade Marks Act" 1976)

Norms and practices for enforcement of IP rights should be diversified, flexible and commensurate for development of effective enforcement procedures of trademark in member countries. The Judiciary of member states must provide civil remedies including injunctions, compensatory damages, disposal of infringed goods and other services outside channel of commerce. The legislature of member states is required to make changes in existing domestic laws of IP to provide adequate remedies and relief to the owner/user of registered trademark. IP is a personal property of right holder thus burden and cost for its enforcement is to be borne by right holder himself. (Xuan Li & Correa, 2009)

Provisional Measures

TRIPS contain article 50 in Part III dealing with provisional measures of trademark enforcement in member states of WTO. The Court of member state may order an injunction when there is a reasonable cause to believe that if injunction is not ordered, it may harm applicant or evidence may be destroyed. The Court may ask plaintiff to provide security or surety before ordering injunction to prevent abuse and to protect defendant. Defendant's right of notice and right of hearing are required to be accorded before pronouncing injunction order and he may also have the opportunity of review upon decision of the Court within prescribed time. If injunction order is overruled on review application of defendant, the Court may order plaintiff to give compensation to defendant for the loss he has suffered. The injunction order may be passed by administrative authority keeping in view principles laid down in TRIPS (Taubman, 2012).

Granting injunctions by the Court is preventive relief whether temporary or perpetual. Temporary injunctions are those injunctions and stay orders of the Court which are applicable until specified time mentioned in the order or when time is not mentioned in the order until further order of the Court. Temporary injunctions can be awarded at any time of proceedings before the Civil Court. Perpetual injunctions can be granted by the Court at the time of decree upon merits of the case to stop defendant perpetually from asserting right which is right of plaintiff and to stop defendant from

doing any other act perpetually (Mohamed, 2016). Perpetual injunction can be granted at time of the decree on merits of the case by the Court to prevent breach of an expressed or an implied obligation when (i) defendant is trustee of the property of plaintiff, (ii) damage of an invasion cannot be ascertained, (iii) pecuniary relief is not adequate of damage, (iv) pecuniary compensation cannot be granted, or (v) injunction is required to prevent multiplicity of legal proceedings. To prevent breach of performance, it is necessary to stop breach of an obligation as well as to compel someone to do some act and that compelling is through the Civil Court under mandatory injunction (Mohamed, 2016).

Trademark owner may apply for obtaining injunctions before the Court under Specific Relief Act 1950 to stop further infringement of his trademark. Specific Relief Ordinance number 29 was first enacted in 1950, thereafter it was revised in 1974 and changed into the present form by an act number 134 of 1974 ("Specific Relief Act" 1950). Application for grant of an injunction may be made by any party of proceedings before or after trial by notice of application supported with affidavit and where case is of urgency may be made ex parte and must contain clear and concise statement of (i) facts giving rise to claim, (ii) facts giving rise to application, (iii) facts relied on to justify application ex-parte, (iv) details of given notice to other party, (v) answer by other party, (vi) facts which may lead the Court not to grant application ex-parte, (vii) any similar application made to another Judge, and (viii) precise relief sought. Interim injunction obtained on ex-parte application shall automatically lapse 21 days from the date it was granted. (Rule 1, Order 29"Rules of Court" 2012)

An injunction can be refused if it is (i) required to stay judicial proceedings except if it is required to stop multiplicity of judicial proceedings, (ii) required to stop judicial proceedings pending before the upper Court, (iii) required to stop any person to apply before any legislative body, (iv) required to stop public authorities of any department of the Malaysian Government to perform their public duties, (v) required to stay criminal proceedings before the Court, (vi) required to prevent breach of contract whose performance is not specifically enforced , (vii) required to stop nuisance when it is not clear whether it comes under the definition of nuisance or not, (viii) required to prevent continuing breach of contract (ix) required to disentitle applicant or his agent to assist the Court, (x) when there is any other effective relief which can be obtained except in case breach of a trust, or (xi) when applicant has no personal interest in the matter. (Sections 50-55"Specific Relief Act" 1950)

Section 70B of Trade Marks Act 1976 states that the proprietor of trademark is entitled to restrain use of trademark which or essential part of which is identical with and nearly resembles with proprietor's trademark in respect of same goods/services and when use is likely to deceive or cause confusion.(McCarthy, 2009) Section 50 of Trade Marks Act 1950 states that injunction is preventive relief which is granted at

discretion of the Court temporarily or perpetually. Section 51 of Specific Relief Act 1950 states that temporary injunction is granted at any time of the suit regulated by law relating to civil proceedings and continue to apply until specified time or until further order of the Court and perpetual injunction is only awarded at Decree of case decided by the Court (McKenna, 2010).

The High Court held in the case of *Muhammad Hilman bin Idham v Kerajaan Malaysia* that an order for temporary injunction could be sought only in aid of prospective order for perpetual injunction. If in event of plaintiff's success, he could not obtain decree for perpetual injunction, it was not competent for him to ask for temporary injunction. Temporary injunction would not be granted in cases where permanent injunction was not available under sections 52-54 of Specific Relief Act 1950 ("*Muhammad Hilman bin Idham & Ors v Kerajaan Malaysia & Ors*" (2011) 6 MLJ 565).

The High Court also held in another case between *Tidalmarine Engineering Sdn Bhd v Kerajaan Malaysia* that Specific Relief Act 1950 recognized distinction between temporary and perpetual injunctions issued by the Court. Judicial views were however divided as to whether temporary injunction or as was commonly referred to interlocutory injunction as opposed to permanent injunction could be issued against government/department of government/government officers/any related party to the government ("*Tidalmarine Engineering Sdn Bhd v Kerajaan Malaysia (Jabatan Kerja Raya Malaysia Cawangan Terengganu)*" (2011) 2 MLJ 400)

Section 53 of Specific Relief Act 1950 states that mandatory injunction is granted to (i) prevent breach of obligation, and (ii) compel performance of certain acts. The High Court held in the case of *Jasmine Food Corporation v Leong Wai Choon* that the Court was clearly empowered and had jurisdiction to grant summary judgment for trademark infringement case even if it involved a claim for permanent mandatory injunction ("*Jasmine Food Corp Sdn Bhd v Leong Wai Choon & Anor*" (2011) 11 MLJ 812).

The Court of Appeal Putrajaya held in the case of *Credit Guarantee Corporation Malaysia v SSN Medical Products* that the Court recognized force of argument that defendant should not be compelled to apologize against his will as very spirit of apology was that it must come from heart, something which defendant wished to do because wrong he had done to plaintiff. On the other hand, order compelling defendant to merely withdraw or correct offending statement after trial seems to be of different character or genre from that of an apology. In same way that the Court compels defendant to pay damages for defamation, there is no reason or principle why it cannot compel issue of correction. Of course, cases where the Court should think that justice requires grant of mandatory injunction to issue either letter of withdrawal or correction must be quite exceptional ("*Credit Guarantee Corp Malaysia Bhd v SSN Medical Products Sdn Bhd*" (2017) 2 MLJ 629).

Administrative Procedure

TRIPS contain article 49 in Part III dealing with administrative procedure of trademark enforcement in member countries of WTO. Trademark may be invalidated by administrative authority of member state if it is consisted of wine or spirit, wrongly indicated to the place which is not its origin by ensuring equitable treatment to producers and not misleading the consumer. If trademark is registered prior to entry into force of TRIPS, it does not validate registered trademark under TRIPS and all member states are required to apply administrative provisions as per their legislative requirements ("Agreement on Trade Related Aspects of Intellectual Property Rights" 1994).

The opposing party to registration of trademark may give written notice to the Registrar and to the applicant within prescribed time after issuance of advertisement. Notice should include grounds of opposition. The applicant for registration of trademark submits counter statement to the Registrar and to opponent after receiving the notice. Parties submit evidences within prescribed time and if counter statement and evidences are not submitted by parties, application for registration would be abandoned and evidences would be recorded, the Registrar accepts application in full or with some conditions or rejects it. Decision of the Registrar is appealable before the High Court and the Court is required to decide matter after hearing disputing parties and the Registrar (Section 28"Trade Marks Act" 1976).

In the case of *Mesuma Sports v Majlis Sukan*, Majlis Sukan Negara Malaysia is a statutory body established under National Sports Council of Malaysia Act 1971 to make clothes carrying tiger stripes' design to be wearied by Malaysian Athletes. Defendant Majlis Sukan assigned work to one of the manufacturer and later it was assigned to plaintiff Mesuma Sports. After sometimes, plaintiff applied for registration of tiger stripes' design and later defendant applied for same before the Registrar of trademark. The Registrar of trademark objected application of defendant. Later, defendant filed civil suit in the Court. The Court decided matter in favor of defendant and ordered the Registrar of trademark to register tiger stripes design in favor of defendant and make its entry in official trademark register ("*Mesuma Sports Sdn Bhd v Majlis Sukan Negara Malaysia*" (2015) 6 MLJ 465).

The Court of law or the Registrar when validity of registered trademark comes in question may order in favor of the owner all expenses, charges and costs unless the Court decides the contrary, but the Registrar cannot be ordered to pay costs. If relief of an alteration or rectification of the register is granted, the registrar when asked must appear before the Court. He may also be directed to submit similar nature cases presented before him and that can be taken as evidences in proceedings. The Registrar may take evidences through declaration or through viva voce examination provided

no direction is given for that purpose and those evidences may be used in the Court through an affidavit as well as copies of the original work sealed by the Registrar are acceptable as an evidence before the Court. The certificate issued by the Registrar is admissible evidence before the Court. The foreign document is also admissible evidence if document is sealed by the authorized officer or a foreign government or if certificate is issued by an authorized officer on validity of that document. The foreign state is under a reciprocal agreement with the government of Malaysia for acceptance of documents, but this does not mean that Malaysian Government is bound to accept recognition of all foreign trademarks. The Registrar may be asked to give his advice on any trademark whether it is distinguishable or not and the person asked for advice may on negative advice of the Registrar may withdraw his application of trademark registration with fee reimbursed. The decision of the Registrar is not appealable except if an appeal is given under provisions of Trade Marks Act 1976 provided that the Court has power of review in all orders of the Registrar passed related to entry in question or correction. The Court enjoys powers given to the Registrar under Trade Marks Act 1976 in an appeal upon decision of the Registrar (Sections 61-69, 73"Trade Marks Act" 1976).

In the case of *PELITA Samruda Pertama v Venkatasamy a/1 Sumathiri*, appellant PELITA is the owner of hotel and has right to sale food and related things at its premises under trademark PELITA as well as PELITA oil lamp a common-law trademark which is protected under Paris Convention. The Respondent Venkatasamy applied for registration of same trademark PELITA before the Registrar of trademark. The owner of PELITA replied on application of respondent before the Registrar of trademark that he already had ownership of trademark PELITA, but the Registrar rejected his contention and registered subsequent application of PELITA in favor of respondent. Appellant filed appeal before the High Court against decision of the Registrar and contended that registration of subsequent trademark PELITA caused confusion and deception at market place and it damaged goodwill and reputation of appellant. The Court held that this case was a clear-cut case of common law mark protection under International Convention and Malaysia was a common-law country thus case was decided in favor of appellant with costs RM 10.000 and the Registrar was directed to expunge entry of respondent from trademark register ("*PELITA Samudra Pertama (M) Sdn Bhd v Venkatasamy a/l Sumathiri* " (2012) 6 MLJ 114).

The Court asks the Registrar to expunge entry of trademark from trademark register and sometimes asks the Registrar to register trademark. In the case of *Yong Teng Hing v Walton International Limited*, appellant Yong Teng Hing and respondent Walton International applied for registration of trademark "GIORDANO" for trade of their leather garments. The Registrar of trademark refused to register trademark of both parties until their claim is to be

decided by the Court. Appellant claimed that he has been using "GIORDANO" trademark since 1986 and respondent claimed that this trademark was first used at Hong Kong in 1982 and it was assigned to him by GIORDANO Limited and he also claimed that he was registered owner of similar trademark since 1982 and he started using objected trademark in 1990. The Court held that contention of respondent is true as appellant failed to prove his claim before the Court hence matter was decided in favor of respondent with costs and the Court ordered the Registrar of trademark to register "GIORDANO" trademark in favor of respondent ("*Yong Teng Hing v Walton International Ltd*" (2012) 10 MLJ 244).

Border Measures

TRIPS contain articles 51-60 in Part III dealing with border measures of trademark enforcement in member countries of WTO. Notice for suspension to release counterfeited trademark goods may be delivered to both parties. If execution proceedings are not initiated by the applicant within 10 working days after suspending importation of goods by customs authority, the authority may release seized suspected trademark goods. In certain cases, 10 more days may be given to the applicant for start of judicial proceedings which can be extended to 31 calendar days if suspension is continued based on injunction order passed by the Court. The authority may order the applicant to pay appropriate compensation because of malicious judicial proceedings initiated by the applicant who caused harm

to owner, importer or consignee of seized goods. The right holder and the importer have right of inspection on all imported goods upon which claim of the right holder is initiated (Taubman, 2012).

The customs authority may be required to tell name and address of consignor, consignee and importer as well as quantity of goods after receiving request from the right holder. All actions related to suspension of goods may be taken on the request of right holder, but relevant authorities of member states may act based on own initiative in good faith and may require the right holder to provide sufficient information which may help them to take necessary action and the right holder may be notified for that action. Authorities may be ordered to dispose-off or destruct infringed goods and in case of counterfeited trademark goods, re-exportation cannot be allowed without alteration. It is pertinent to mention that application is required in case of goods of small quantity which can either be sent through small consignment or can be carried in personal luggage (Articles 51-60 "Agreement on Trade Related Aspects of Intellectual Property Rights" 1994).

As per articles 9-10 of Paris Convention, imported goods bearing unlawful trade name or trademark are required to be seized in all member countries of WIPO on the request of public prosecutor, competent authority or an interested party under domestic legislation of member state. Goods may be seized by customs authority of member state if there is a false indication with respect to source of goods and identity of producer.

In case if seizure is not allowed under domestic legislation of member state then prohibition on importation may be invoked and if this remedy is also not available under domestic legislation of member state then any sufficient remedy may be invoked which is available under domestic legislation and member states of WIPO are required to take steps to amend relevant domestic laws to comply with provisions of relevant International Treaties (Articles 9-10 "Paris Convention for the Protection of Industrial Property" 1967).

The Federal Minister of IP may order for prohibition of importation of goods bearing false trade description or false trade indication to stop them from importation and any person commits or induces commission of false trade description offence or offence of false trade indication outside territory of Malaysia from Malaysia is consider an offender under Trade Descriptions Act 2011 (Sections 26-27"Trade Descriptions Act" 2011).

If counterfeited trademark goods are about to be imported to Malaysia, the registered trademark owner or his agent may inform the Registrar through written application with documented evidence and relevant information with payment of prescribed fee. The Registrar either approves or disapproves written application of trademark owner. Approval letter by the Registrar upon application of trademark owner would remain intact for 60 days unless withdrawn by the applicant. Furthermore, the Registrar may require applicant to deposit security to prevent abuse and to protect importer as well as to pay compensation or to reimburse expenses likely to incur on seizure. Upon receiving application, the Registrar is required to notify the authorized officer of customs. The authorized officer of customs upon receiving request from the Registrar is required to (i) prohibit import of counterfeited trademark goods into Malaysia, (ii) seize and detain counterfeited trademark goods, (iii) store seized counterfeited trademark goods at a secured place, and (v) inform the Registrar, importer and applicant about seizure in a written form (Sections 70D-70G"Trade Marks Act"1976).

Section 70O of Trade Marks Act 1976 empowers authorized customs officer to seize suspected goods if he acts in good faith. The authorized customs officer may detain or suspend release of goods based on prima facie evidence that he has acquired counterfeited trademark goods. Thereupon, authorized customs officer shall inform the Registrar, importer and proprietor of registered trademark and may at any time seek the proprietor of registered trademark to furnish information that may assist him to exercise his powers (Lakshmi & Patro, 2009).

Furthermore, section 45 of Customs Act 1967 states that if goods other than bona fide ship's stores are found by authorized customs officer in any vessel in territorial waters and such goods are not correctly accounted for in manifest or other documents which ought to be aboard such vessel then such goods shall deemed to be unaccustomed goods and shall be liable to seizure (Chong, 1998).

In the case of Goodness *for Import and Export v Phillip Morris Brand Sarl*, plaintiff is limited liability Company with seat at Neuchatel, Switzerland. Plaintiff Phillip Morris Brand Sarl is registered proprietor and common law owner of MARLBORO and MARLBORO Roof Lines trademarks "MARLBORO marks" in Malaysia for tobacco products which is valid and subsisting at all material times. Plaintiff has exclusive right to use MARLBORO marks in relation to cigarettes. Royal Malaysia Customs detained and searched 12 containers which were on board vessel CSAV Pyrenes berthed at West Port, Klang on the basis that containers were declared as Omani Marble, its investigation revealed that containers contained cigarettes and 10 MALIMBO containers containing alleged infringing products, namely, MALIMBO cigarettes were searched, seized, and detained by Royal Malaysia Customs and Excise in Malaysia. The Federal Court Putrajaya held that defendant/appellant used "MARLBORO marks" unauthorized as is likely to deceive and cause confusion during trade in relation to cigarettes, constitute misrepresentation, calculated and likely to mislead/deceive members of public. The Court held that resultantly plaintiff has suffered substantial damages and there is real danger that defendant may continue to act in such manner that will cause real likelihood of damage to plaintiff. The Court dismissed appeal of defendant on ground that acts of defendant will injure and have injured reputation/goodwill of plaintiff unless defendant is restrained by the Court

continue to do so ("Goodness for Import and Export v Phillip Morris Brand Sarl" (2016) MLJ 350).

The Registrar may issue notices for release of seized goods if legal proceedings is not instituted against importer within prescribed time or if applicant consented for release of seized goods. Aggrieved party may apply in the Court after release of seized goods for compensation and the Court may order applicant to pay compensation to importer for damages and suffering he has faced. Compensation granted to aggrieved party if exceeds is due upon the applicant (Section 70P"Trade Marks Act" 1976).

Criminal Procedure

TRIPS contain article 61 in Part III dealing with criminal procedure of trademark enforcement in member countries of WTO. Useful criminal procedure should be available to the owner of registered trademark in member state to deter infringer/counterfeiter from doing wrongful act against registered trademark owner/user. Criminal remedies of member states must include (i) imprisonment, (ii) fine, (iii) destruction, (iv) seizure, and (v) forfeiture of material (Taubman, 2011).

The High Court stated in the case of *Solid Gold Publishers v Chen Wee Ho* that it was suitable for the owner of registered trademark to adopt criminal enforcement procedure because in criminal enforcement procedure, applicant was only required to give an application and all other preceding acts to be borne by authorized authorities and the case be taken up by the public

prosecutor and in case if he failed in criminal proceedings, he might not be liable to pay costs as in case of failing in civil proceedings, he might end up giving damages for the loss occurred due to institution of civil suit ("Solid Gold Publishers Sdn Bhd v Chen Wee Ho" (2003) MLJ 658).

Counterfeited trademark goods include application of false trade description to goods. Trade Description Order (TDO) can be obtained by the owner of registered trademark if infringement of trademark is with non-identical trademark as it is not a requirement if trademark is identical. TDO can be obtained for 1 year and it is admissible evidence before the competent authority in Malaysia. Limitation for institution of criminal enforcement proceedings in case if offence held under Trade Descriptions Act 2011 is 1 to 3 years from the date of its discovery to proprietor (Section 63"Subordinate Courts Act" 1948).

The Court of first instance in IP offences and their criminal enforcement is the Court of Sessions in Malaysia, the Court of Appeal is the High Court and the Federal Court enjoys certiorari jurisdiction where it can call upon pending matters in subordinate court and it enjoys jurisdiction of Appellate Court on matters decided by High Courts. IP offences may be tried in the High Court as the Court of First instance on *suo motu* order of the Court or on an application of Public Prosecutor (Sections 417, 177-177A, 418A"Criminal Procedure Code" 1935).

First Information Report (FIR) can be filed against infringement/counterfeiting of registered trademark before the competent authority in Malaysia. Arrest can be made when offence is cognizable, search of body and search of premises can also be made under relevant provisions of Code of Criminal Procedure 1935. Remand order can also be obtained if investigation is not completed within 24 hours. Trademark offences are generally summons cases unlike copyright offences which are mostly warrant cases. A warrant case is that case in which punishment is capital or an imprisonment for more than 6 years and summons case is that case in which punishment is not capital and imprisonment not exceeding 6 years (Section 107"Criminal Procedure Code" 1935).

Trademark infringement comes under the ambit of false trade description which is a direct or indirect false indication to goods or part of goods in an advertisement with relation to its nature, designation, length, height, width, area, volume, capacity, weight, size, quantity, gauge, method of production and manufacturing, processing and reconditioning, composition, strength, fitness, standard of fitness, performance, behavior or accuracy or any other technological characteristic or date expiration of product. Any person applies false trade description to any goods, take possession of those goods, exposes that for supplying and supplies goods is punishable under Trade Descriptions Act 2011 ("Trade Descriptions Act" 2011).

The Minister in charge of the Ministry of Domestic Trade, Cooperatives and Consumerism is required to appoint Controller/Assistant Controller/Deputy

Controller for investigation of false trade description and false misleading advertisement offences under Trade Descriptions Act 2011. The Minister is also required to appoint the Registrar/the Director of MyIPO for making, keeping and maintaining entries of TDO (Sections 3-7"Trade Descriptions Act" 2011).

In the case of Lian *Bee Confectionary Sdn Bhd v QAF Company Limited*, Lian Bee is seller of bakery items and among them is filled cream bun which he has been selling under trademark "Squiggle" since 2007. QAF Company limited is Singaporean company which has been using same trademark "Squiggle" for its bakery items since 2004. Gardenia Bakeries is subsidiaries of Singaporean company which has been using "Squiggle" trademark for selling cream filled bun since 2003 and TDO was taken by QAF Company in 2008 thus Trial Court and Appellant Court decided matter in favor of QAF Company based on TDO ("*Lian Bee Confectionery Sdn Bhd. v QAF Limited*" (2012) 4 MLJ 20).

When trade description is made, a person who supplies goods would be considered as he applies trade description on goods. While determining class of goods in trade description, form, consent, time, place, manner and other related matters would be taken into consideration (Sections 10-11"Trade Descriptions Act" 2011). The Minister may exempt any description of goods which does not fall under the definition of false trade description for exportation or for any other specific purpose mentioned in the order issued by the Minister (Sections 56"Trade Descriptions Act" 2011).

Any person initiating false entry in the register of trademark in its copy or makes a false document identical to the register or produces a false document as evidence is guilty of an offence and if proved guilty would be punished under Trade Descriptions Act 2011 (Section 9"Trade Marks Act" 1976). No person can misrepresent himself as the registered owner/user of trademark if he does so, it is an offence and he is punishable under Trade Descriptions Act 2011. If a trademark user wants legal benefits, he must register his trademark in the register of trademark in a prescribed manner but registration is not necessary in respect of legal benefits as to passing off (Sections 81-82"Trade Marks Act" 1976).

Any conduct, practice, statement, representation or an indication which leads a person to an error about price, supply or an approval of goods/services is misleading and false statement. The burden of proving or disproving false misleading statement in an advertisement is upon the accused and not on the accuser. The accused might take the defense that the offence was done (i) due to default of another person and identify another person within 14 days through a notice to the prosecutor, (ii) a natural person might take the defense that false trade description or false misleading statement was used personally or domestically, (iii) offence was occurred due to mistake or an accident beyond control of the accused and the accused has taken all precautions and due diligence to avoid commission of

an offence, (iv) the natural born accused was unaware of false trade description even after a reasonable diligence, or (v) the accused publisher received misleading advertisement in normal course of business and he was unaware of its illegality under Trade Descriptions Act 2011 (Sections 13-25"Trade Descriptions Act" 2011).

No agent is considered untrustworthy of credit if he abetted commission of an offence for securing evidence and this act is admissible evidence in his favor before the Court. If suspected goods are found in more than one packing and more than one species, inspection of one centum or five samples are enough to believe that remaining contains the same. The Assistant Controller has all powers to investigate as Police Officer under Criminal Procedure Code 1935 (Sections 39-55"Trade Descriptions Act" 2011).

The Principal is responsible of offences committed by his agent or his servant if they commit an offence while exercising due course of employment except if there is a reasonable cause to believe that offence has been committed without the consent of Principal. The Director, Chief Executive Officer, Chief Operating Officer, Secretary of Corporation or other similar designated officers of the body corporate are responsible for offences committed by the body corporate except if offence is committed by body corporate without their knowledge, consent and connivance and they have taken necessary precautions to stop commission of an offence (Sections 56-66 "Trade Descriptions Act" 2011).

CONCLUSION

Trademark is a mark, name, sign, smell or a sound which distinguishes goods/services of one undertaking from goods/services of other undertakings. It is required to be distinctive and non-descriptive; it loses its distinctiveness when registered owner of trademark does not take prompt action against its infringement. The aggrieved party may adopt different procedures for trademark enforcement including (i) civil procedure, (ii) criminal procedure, (iii) administrative procedure, (iv) provisional measures, and (v) border measures. Important trademark laws of Malaysia include (i) Trade Marks Act 1976 (ii) Trade Marks Regulations 1997 (iii) Trade Descriptions Act 2011 (iv) Intellectual Property Corporation of Malaysia Act 2002. MyIPO works for registration and protection of IP rights in Malaysia as there is no separate body of trademark like USPTO in USA. It is therefore recommended that a specialized body for registration and protection of trademark should be established in Malaysia.

The trademark protection is for 10 years in Malaysia under section 32 of Trade Marks Act 1976 which states that "the registration of trademark shall be for a period of 10 years but may be renewed from time to time" as article 18 of TRIPS states that "the registration of trademark shall be renewable indefinitely", it is therefore recommended that the word "indefinitely" should be added after "time to time" in section 32 of Trade Marks Act 1976.

Malaysia is party to WIPO and WTO which are 2 main International Organizations working for protection and promotion of trademarks all over the world. Main International Trademark treaties include (i) Paris Convention, (ii) Madrid Protocol, and (iii) TRIPS. Malaysia has ratified Paris Convention and TRIPS but has not ratified Madrid Protocol. It is therefore recommended that Malaysia should follow footsteps of USA and EU by acceding to Madrid Protocol and amending Trade Marks Act 1976 accordingly for the implementation of International Trademark registration in Malaysia to be protected in 98-member states signatories of Madrid Protocol.

REFERENCES

Agreement on Trade Related Aspects of Intellectual Property Rights (1994).

Blakeney, P. M. (1996). *Trade Related Aspects of Intellectual Property Rights: A Concise Guide To The TRIPS Agreement*. United Kingdom: Sweet & Maxwell.

Bodenhausen, G. H. C. (1968). *Guide to the Application of the Paris Convention for the Protection of Industrial Property* (Vol. 611). Geneva, Switzerland: United International Bureaux for the Protection of Intellectual Property

Bryer, L. G., Lebson, S. J., & Asbell, M. D. (2011). *Intellectual property operations and implementation in the 21st century corporation*. New Jersey, US: John Wiley & Sons.

Chong, J. W. (1998). Malaysian Intellectual Property Laws and their Compliance with the TRIPs Agreement. *The Journal of World Intellectual Property, 1*(6), 1003-1016.

Conlon, R. C. (1975). Reacting to Worldwide Trademark Developments in Asia. *The Trademark Reporter, 65*, 491.

Credit Guarantee Corp Malaysia Bhd v SSN Medical Products Sdn Bhd. (2017). *2 Malaysian Law Journal* 629.

Criminal Procedure Code, Act 593 (1935). (My).

Dutfield, G., & Suthersanen, U. (2008). *Global Intellectual Property Law*. United Kingdom and United States of America: Edward Elgar Publishing.

Goodness for Import and Export v Phillip Morris Brand Sarl. (2016). *Malaysian Law Journal 350.*

Jasmine Food Corp Sdn Bhd v Leong Wai Choon & Anor. (2011). *11 Malaysian Law Journal 812.*

Lakshmi, V. V., & Patro, A. M. (2009). Intellectual Property Protection at Border. *Journal of Intellectual Property Rights, 14*(4), 330-339.

Leaffer, M. A. (1998). The new world of international trademark law. *Marquette Intellectual Property Law Review, 2*, 1.

Lian Bee Confectionery Sdn. Bhd. v QAF Limited. (2012). *4 Malaysian Law Journal 20.*

McCarthy, J. T. (2009). Are Preliminary Injunctions Against Trademark Infringement Getting Harder to Achieve. *Intellectual Property Law Bulletein, 14*, 1.

McKenna, M. P. (2010). The Normative Foundations of Trademark Law. *Notre Dame Law Review, 82*(5), 78.

Mesuma Sports Sdn Bhd v Majlis Sukan Negara Malaysia. (2015). *6 Malaysian Law Journal 465.*

Mohamed, K. (2016a). Prevention of Trademark Counterfeiting through Intellectual Property Enforcement System in Malaysia. *The Debt Financing and Financing Risk Persistency*, 82.

Mohamed, K. (2016). Protecting Business Interest Against Intellectual Property Rights

Infringement Through Interim Injunction in Malaysia. *International Business Management, 10*(16), 3619-3626.

Moscato-Wolter, A. (2016). What is the McLaw in Malaysia? *Akron Intellectual Property Journal, 5*(2), 231-249.

Muhammad Hilman bin Idham & Ors v Kerajaan Malaysia & Ors. (2011). *6 Malaysian Law Journal 565.*

Oriental & Motolite Marketing Corp v Syarikat Asia Bateri Sdn Bhd. (2012). *05 Malaysian Law Journal 87.*

Paris Convention for the Protection of Industrial Property. (1967). (Fr).

PELITA Samudra Pertama (M) Sdn Bhd v Venkatasamy a/l Sumathiri. (2012). *06 Malaysian Law Journal 114.*

Plastech Industrial Systems Sdn Bhd v N & C Resources Sdn Bhd & Ors. (2012). *05 Malaysian Law Journal 258.*

Roth, C. (2014). Study on the Madrid Protocol System in Japan for Cambodia. *Tokyo University of Science.*

Rules of Court, P.U. (A) (2012). (My).

Samuels, J. M. (1993). The Changing Landscape of International Trademark Law. *Georgh Washington Journal of International Law and Economics, 27*, 433.

Shaifubahrim Bin Mohd v EM Exhibitions (M) Sdn Bhd & Anor. (2012). *9 Malaysian Law Journal 84.*

Solid Gold Publishers Sdn Bhd v Chen Wee Ho. (2003). *Malaysian Law Journal 658.*

Specific Relief Act, *Act 137* (1950). (My).

Subordinate Courts Act, *Act 92* (1948). (My).

Taubman, A. (2011). *A practical guide to working with TRIPS.* United Kingdom: Oxford University Press.

Taubman, A. (2012). *A handbook on the WTO TRIPS agreement.* United Kingdom: Cambridge University Press.

Tidalmarine Engineering Sdn Bhd v Kerajaan Malaysia (Jabatan Kerja Raya Malaysia Cawangan Terengganu). (2011). *2 Malaysian Law Journal 400.*

Trade Descriptions Act, Act 730 (2011). (My).

Trade Marks Act, *Act 176* (1976). (My).

Trade Marks Regulations, Act 175 (1997). (MY).

Xuan Li, & Correa, C. M. (2009). *Intellectual Property Enforcement International Perspective.* United Kingdom: Edward Elgar Publishing Limited.

Yong Teng Hing v Walton International Ltd. (2012). *10 Malaysian Law Journal 244.*

Yu, P. K. (2009). The Objectives and Principles of the TRIPS Agreement. *Houston Law Review, 46*, 979.

Yu, P. K. (2011). TRIPS enforcement and the developing countries. *American University International Law Review, 26*, 727-782.

Orchid Consortium Communication Network in Indonesia

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ABSTRACT

The problems of the national orchid industry, include small scale business, lack of seed stock, lack of mastery of cultivation and post-harvest technology, low quality and quantity of production, inadequate market linkages, and poor coordination, need collective cooperation among actors. The development of Indonesia's orchid agribusiness should be realized by building alliance to increase the added value and competitiveness of the Indonesian orchid. The consortium of orchids is expected to find a solution to overcome those orchid problems and to design future orchid business development. The purposes of this study was to determine the actor who played the local, global and betweenness centrality and to see the relationship dynamics of the group. The method used for this research was through survey. Data were collected by interview using a questionnaire. This current research used census sampling techniques. Communication networks were analyzed using Ucinet 6 software. The results of the study show: 1) orchid clonal propagation: the stars are educational organisation and research & development organisation, the population is homogeneous, the centrality index is about 9.55%; 2) the orchid cultivation SOP: the star is governmental public services organisation, the population is homogeneous, the centrality index is about 23.09%; 3) orchid domestic market: the star is agribusiness organisation, the population is homogeneous, the centrality index is about 2.56%; 4) orchid area development: the star is governmental services organisation, the population is heterogeneous, the centrality index is about 7.27%.

Keywords: Alliance, communication networks, consortium, information sources, orchid

INTRODUCTION

The bureaucratic organisation that handles the development of Indonesian floriculture is developing the activation of external networks as coordination media. The coordination media of the orchid alliance is named the Orchid Consortium. Orchid consortium is a new form of coordinated, collective actions, cooperation among associations of orchid farmers and other stakeholders. It is designed to produce the conditions which are necessary to produce an effective form of cooperation competence in the development of orchid propagation that will use the results of the development to compete in product markets and cooperation in developing policies that support conducive climate to the development of orchids and it also allows partners to provide better service together in order to compete as a team in the product market (Gandasari, Sarwoprasodjo, Ginting, & Susanto, 2015). It was built in order to increase the contribution of orchid farms to the national economy and competitive orchid production (DBPF, 2012). The concept of the alliance is the system of cooperation among organisations that drives the development of orchid floriculture to solve various problems in the orchid industry and to achieve the common goal of orchid floriculture development in Indonesia.

It is in line with the van den Ban's (1997) opinion that the farmers' problems could be solved through collective decision making by all people, institutions, and forces associated with the structure and the other complexity processes (Rogers 1976). However, new forms of interaction and agreement are needed among the many players in the agricultural fields (Leeuwis, 2009), to increase the connectivity through the physical, social, institutional, individual (Monge et al., 1998), and technological areas (Kolb, 2008).

The study on orchid consortium communications network is important to see the communication behaviour of the consortium members in receiving, giving, and disseminating information. This is in line with Nohria's (1998) and Haris and Nelson's (2008) opinions that every organisation is an important social network, and the existence of these networks needs to be analysed because the network is the centre of organisation's communication, both internally and externally. Based on the analytic perspective of Moliterno and Mahony (2011) and Monge et al. (1998), studying communication networks among organisations is important because it correlates with the level of organisational development and is an important piece of an organisation's resources, which should be used to improve the organisation's effectiveness.

The results of the previous studies' reviews show that most of the studies on the external communication and inter-organisation communication studied the communication media (Breidbach, Kolb, & Sirivasan, 2013; Gallupe et al., 1995; Sarinastiti, 2004), which is the coordination of inter-government coordination, government-companies,

and government-company-academics outside the agricultural sector (Alwi, 2007; Amrantasi, 2008; Browning, Beyer, & Shetler, 1995; Handoko, 2008; Marigun, 2008; Sarinastiti, 2004). Though a lot of studies on the inter-organisation network and communication network in the field of social and culture (Gustina, Hubeis, & Riyanto, 2008; Lubis, 2000), diffusion of innovation (Ahuja, 2000; Anggriyani, 2014; Bulkis, 2013; Cindoswari, 2012; Rangkuti, 2009) and economics (Nohria, 1998; Utami, 2013) exist, a study on the communication networks and the alliance strategies that produce public goods in the agricultural sector, and particularly the orchid floriculture, representing multi-sector organisations has not frequently been conducted. The information in agricultural development perspective is very limited, so it is important for communication science to contribute in the study of communication networks among organisations that support the development of agriculture, especially orchid floriculture.

Based on the above, this research focuses on the productivity of the orchid consortium through the analysis of communication networks. According to Rogers and Kincaid (1981) there were five levels of analysis unit in a communications networks which includes: (1) individual, (2) personal communication networks, (3) dyadic relationship, (4) click; and (5) the system (networks). Scott (2000) argued that a number of indicators that could be used in analyzing the communication networks. One indicator of the networks can be seen

from some degree of measurement, namely the centrality. Centrality is divided into three (Scot 2000): local centrality, global centrality, and betweennees centrality. Local centrality is the degree to which an individual dealing with other individuals in the system. Local centrality shows the number of relationships that can be created by individuals in the system. Global centrality measurements based on the terms surrounding the "closeness" or the proximity of the individual. Global centrality measurements are expressed in "distance" term between diverse individuals. Betweenness centrality which measures the extent to which a particular individual is situated between other individuals in a networks.

MATERIALS AND METHODS

This study used a descriptive quantitative approach. The variable used in this study was a communication network. The communication network in this study was assessed based on the information on orchid floriculture agribusiness consisting of information on the orchid clonal propagation, orchid cultivation Standard Operational Procedure (SOP), orchid domestic marketing, and orchid area development policy. The focus of this study is to describe communication network variables emphasized in the communication structure.

The study was conducted for five months from November 2012 to March 2013. Selected group was considered as the research sample and taken by census.

Total samples examined in this study was 30 respondents. The respondents of this study is all members of the orchid consortium, which includes as many as 30 participants that spread throughout eight cities/districts, namely Jakarta, Bogor, Depok, Bandung, Cianjur, Yogyakarta, Malang, and Malang district. The study uses census and sample design to collect the data of information sources. The data collected consists of primary data and secondary data. The primary data was collected from consortium members individually by asking sociometrist questions, specifically, how someone gains information on orchid agribusiness in the fields of orchid clonal propagation, cultivation, domestic marketing, and orchid area development policy, both within the internal agent/ node (orchid consortium) and the external (people from organisations outside the orchid consortium). The secondary data was collected from literature reviews and reports of orchid consortium meetings.

Communication networks analysed in this study were: local centrality, global centrality, and betweenness centrality. Analysis of the communication networks data was using 6.0 Ucinet program.

RESULTS AND DISCUSSION

Communication Network Structure of the Orchid Consortium

In November 2010 the Orchid Consortium was formed and initiated by the Directorate General of Horticulture, Gadjah Mada University (GMU), University of Indonesia (UI), University of Muhammadiyah Malang (UMM), Brawijaya University (Unibraw), Ornamental Crops Research Institute (BALITHI), Agriculture Office of East Java Province (Dinas Pertanian Provinsi Jawa Timur), Indonesian Orchid batch Malang, Indonesian Orchid batch Jakarta, and Bumiaji Batu Farmers Group.

The establishment of Orchid Consortium was motivated by the problems in the national orchid industry, including that the business scale and production centre are still small, and there is an inadequate seed source, a lack of mastery of orchid cultivation and post-harvest technology, a low quality and quantity of production, less extensive market network, lack of regulation support, inadequate human resources, lack of constructive research, and lack of collective work among all the players. The Consortium recognises that there should be an alliance built between all pieces of the orchid industry of Indonesia in order to improve the business performance and increase production, quality, value, and competitiveness.

The Orchid Consortium is an association of organisations that performs the following activities: 1) coordination and cooperation in the scientific study, socio-economics, and environments related to orchid plants in Indonesia, to support the factual and up-to-date knowledge development which is translated into a work program; 2) to disseminate information on research results and the implementation of these results through training, internship, consulting, publication, workshops, and seminars; and 3) to give inputs in the form of policy

concept to the government to encourage the improvement of orchid production, quality, added value, and competitiveness of Indonesian orchid.

The consortium members are organisations, not individuals. There were thirty consortium members when the study was conducted; twelve persons from four service organisations, six persons from five research and development organisations, three persons from three educational institutions, four persons from four associations, and five persons from five agribusiness organisations. The formal education levels of consortium members broke down into 15% holding a doctoral degree, 14% holding a master's degree, 43% holding a bachelor's degree, and 3% holding a diploma degree. This shows that the members of the consortium are the people from various organisations with various fields of expertise that have a high enough education level that they have gained various knowledge and experience

in different fields, and tend to actively seek and disseminate information. Penley (1978) stated that a combination of diverse viewpoints and knowledge would lead to a better solution for a sophisticated problem. Knowledge is a power; the more knowledge are accumulated, the more benefits will be obtained (Minei & Bisel, 2013). Knowledge is also an important resource for the success of the organisation (Tsai, 2000).

The consortium members use various communication media. Electronic mail (email) is an interpersonal communications medium that is mostly chosen. Mailing lists as an information system and collaborative communication are the most widely used as a forum to find and share information. Consortium meetings are conducted once a year to discuss various issues in orchid agribusiness.

Communication Network of the Orchids Clonal Propagation Field

Figure 1 shows the sociogram of the
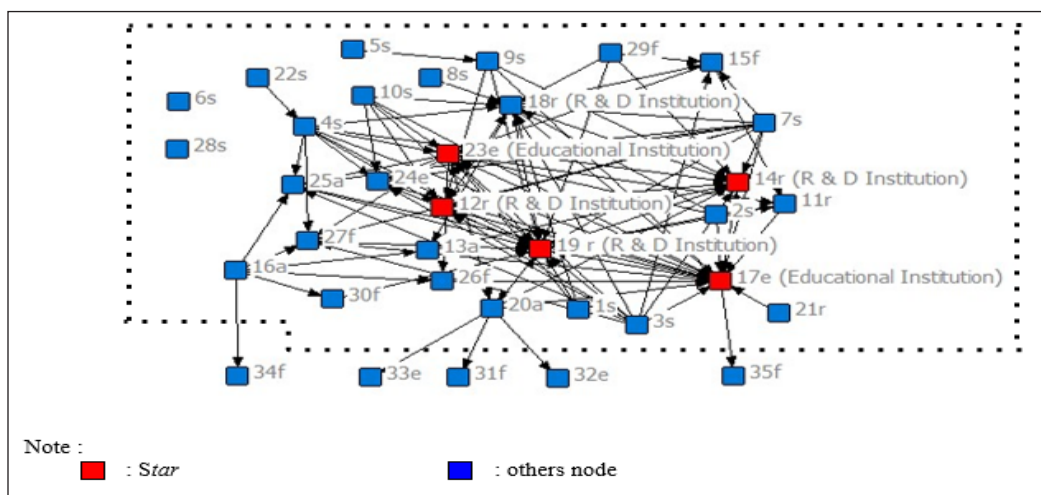
Figure 1. Communication network of the orchids clonal propagation

structure of the communications network among members of the Orchid Consortium regarding the orchid clonal propagation.

The sociogram shows that the member of the orchid consortium members which play a role as a star or source of information is represented by nodes with the highest connectivity degree. It means that certain individuals most contacted by other individuals are the members who can play the role as star. In the orchid clonal propagation field (Figure 1), the nodes who are the stars on orchid clonal propagation are Nodes 17 and 23 from educational institutions and Nodes 12, 14, 18, and 19 from research and development institutions.

Node 19 is a plant biotechnology expert representing BALITHI. The equipment mostly used by Node 19 in communication with other consortium members is the equipment to send email and mailing lists at least 4 times in a month. The information discussed covers SOP of orchid propagation and material/media of tissue cultures.

The purpose behind the analysis of the communication network at the individual level in this study is to see the size of the local centrality, betweenness centrality, and global centrality of individual of organisations who are consortium members. The centrality value is based on the orchid clonal propagation theme in the communications network and can be seen in Table 1.

The stars in the orchid clonal propagation field are Nodes 17 and 23 from UI and UGM; Nodes 12, 14, 18, and 19 from Parent Seed Centre (BBI) Jakarta, Taman Anggrek Indonesia Permai (TAIP), and BALITHI. The identification results show that the stars in the orchid clonal propagation field are credible informants as expert persons with a high formal education background, having experience in orchid propagation technology, having power of information, and can play a role as information sources in orchid clonal propagation. It is different with cassava group (Cindoswari, 2012) where the star is an individual as an informal leader in the systems and agribusiness areas.

Table 1
The centrality value based on orchid clonal propagation

Communication Network Analysis	Nodes	Variation Coofisien (%)	Average	Indeks Maximum	Minimum
1. Local Centrality					
a. In Degree	12,14,17,18,19,23	23.4	3.4	17	0
b. Out Degree	3,7	48.4	3.4	10	0
2. Global Centrality					
a. Infarness	14	-	-	-	-
b. Ourfarness	16	-			
3. Betweenness					
a. Mediator	1,9,17	9.55	-	-	-

The nodes whose highest out-degree value have the highest external relations and can summon more network resources overall may be considered as the most influential members. This means that these nodes are most often related with many people and know or have information about the nodes being a source of information. The nodes with the highest out-degree value in orchid clonal propagation are Nodes 3 and 7 from the Directorate of Floriculture and Post-harvest.

The variability range is low with an out-degree of 23.4% and in-degree of 48.4%. It means that the power of the individual agent is less varied, and there is a large number concentration or centralisation across the network. Strength of individual agents varies more substantially, meaning that there is uneven power in the network. The population in orchid clonal propagation field is homogeneous or centralised because the variability of in-degree is higher than out-degree. This means that the clonal propagation field is an expertise field that is very specific, so that the information is more centralised to certain people who have such expertise.

Networks centrality of the clonal propagation in-degree has a maximum value of 17 and a minimum of 0. While networks centrality of the clonal propagation out-degree has a maximum value of 10 and a minimum of 0. This means that people who are considered the most prominent in the clonal propagation networks in-degree has been linked to17 other people, and the most prominent in the clonal propagation

networks out-degree has been linked to 10 people. Node 19 is a plant biotechnology expert representing BALITHI is the most prominent in the clonal propagation networks in-degree and node 3 and 7 are from Directorate of Floriculture and the Post-harvest are the most prominent in the clonal propagation networks out-degree.

The average out-degree and in-degree of 3.4 means that people who are considered in the clonal propagation networks has been linked to 3 people. It means the connectivity is low, in that participants only discuss the orchid clonal propagation with the star. It makes the star's role very important. Participants rarely share information or discuss the topic with other members.

The global centrality of communication network in the orchid clonal propagation field shows the in-farness of Node 14 and out-farness of Node 16. This means that Node 14 from the TAIP R&D is the agent most quickly contacted by members, while Node 16 from ASBINDO is the fastest agent in disseminating information obtained from the information source.

The nodes that can act as mediators in the orchid clonal propagation field are Nodes 1 and 9 from the Floriculture and Horticulture Seeds services institution, and Node 17 from UI. However, the low betweenness centrality index of 9.55% that means connection in the network can be made without the mediator's assistance.

Communication Network of Orchid Cultivation SOP field

A sociogram describing the structure

of the communications network among orchid consortium members in the orchid cultivation SOP field can be seen in Figure 2. The nodes who are the stars of the orchid cultivation SOP field are Nodes 1, 2, 3, 4, and 6 from the services organisations.

Node 2 is the Head of the Sub-Directorate that handles orchid cultivation, with a formal education level of master's degree in agribusiness management. The

media most widely used in communication with other consortium members is email, mailing list, SMS, and telephone. The frequency of the media use is 8 times a month for email and mailing list, and 8 times a year for telephone and SMS. The information discussed includes orchid cultivation SOP and implementation of orchid cultivation SOP field school.

The centrality value based on the
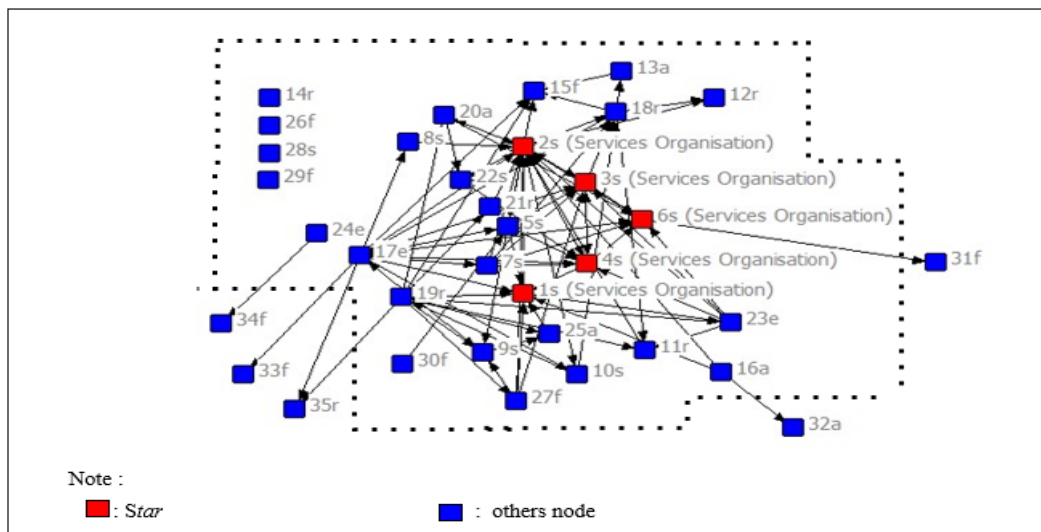
Figure 2. Communication network of the orchids cultivation SOP

Table 2
The centrality value based on orchid cultivation SOP

Communication Network Analysis	Nodes	Variation Coofisien (%)	Indeks		
			Average	Maximum	Minimum
1. Local Centrality					
a. In Degree	1,2,3,4,6	39.9	2.8	14	0
b. Out Degree	17	29.3	2.8	11	0
2. Global Centrality					
a. Infarness	15	-	-	-	-
b. Ourfarness	16	-			
3. Betweenness					
a. Mediator	2	23.09	-	-	-

discussion topic of orchid cultivation SOP in the communication network can be seen in Table 2.

Stars of the highest in-degree on orchid cultivation SOP are Nodes 1, 2, 3, 4, and 6 from Directorate of Floriculture and the Post-harvest, which are responsible for producing orchid cultivation SOP guidelines. So the stars in the orchid cultivation SOP field can act as information centres for other members in accordance with one of the represented organisation functions in serving orchid cultivation SOP. The Node that has the highest out-degree value in the orchid cultivation SOP field is Node 17 from UI. As a researcher, Node 17 has a wide relation with other relevant organisations.

The range of variability is low, with an out-degree of 29.3% and in-degree of 39.9%. This means that the power of the individual agent is less varied, and there is a large number of concentration or centralisation across the network or there is a somewhat uneven power in the network. The population is homogeneous, meaning the orchid cultivation SOP is a specific expertise field so that the information becomes more centralised to certain people who have such information.

Networks centrality of the orchid cultivation SOP in-degree has a maximum value of 14 and a minimum of 0. While networks centrality of the orchid cultivation SOP out-degree has a maximum value of 11 and a minimum of 0. This means that people who are considered the most prominent in the orchid cultivation SOP networks in-degree has been linked to14

other people, and the most prominent in the orchid cultivation SOP networks out-degree has been linked to 11 people. Node 2 is the Head of the Sub-Directorate that handles orchid cultivation is the most prominent in the the orchid cultivation SOP networks in-degree and node 17 is a researcher from UI that mostly keeps in touch with people in orchid area development is the most prominent in the orchid cultivation SOP networks out-degree.

The average out-degree and in-degree of 2.8 mean that people who are considered in the orchid cultivation SOP networks has been linked to 2 people. It means that the connectivity is low. The participants only communicate about orchid cultivation SOP to the star, thus the star's role becomes very important. If the participants do not share or discuss such information with other members, then there are no solid bonds among members of like a group.

The global centrality of the communications network of the orchid cultivation SOP field shows the in-farness of Node 15 and out-farness of Node 16. This means that Node 15 from the agribusiness organisation is the agent with the fastest response, while Node 16 from ASBINDO is the Agent who disseminates information most quickly among the others.

The agent who can act as mediator in the orchid cultivation SOP field is Node 2 from the services organisation. However, connections can be made in the network without the mediator's assistance due to the betweenness centrality index is low about 23.09%.

The interesting finding in orchid cultivation SOP field is that although the star is the node who provides orchid cultivation SOP guideline, the global centrality shows that Node 15 from the agribusiness organisation is the node with the fastest response when contacted by other members in the system. This individual is considered to have various and useful information on orchid agribusiness, quickly responds to communications with other member, and is easily contactable.

Communication Network of Orchid Domestic Marketing field

The sociogram describing the structure of the communications network among members of the orchid consortium regarding
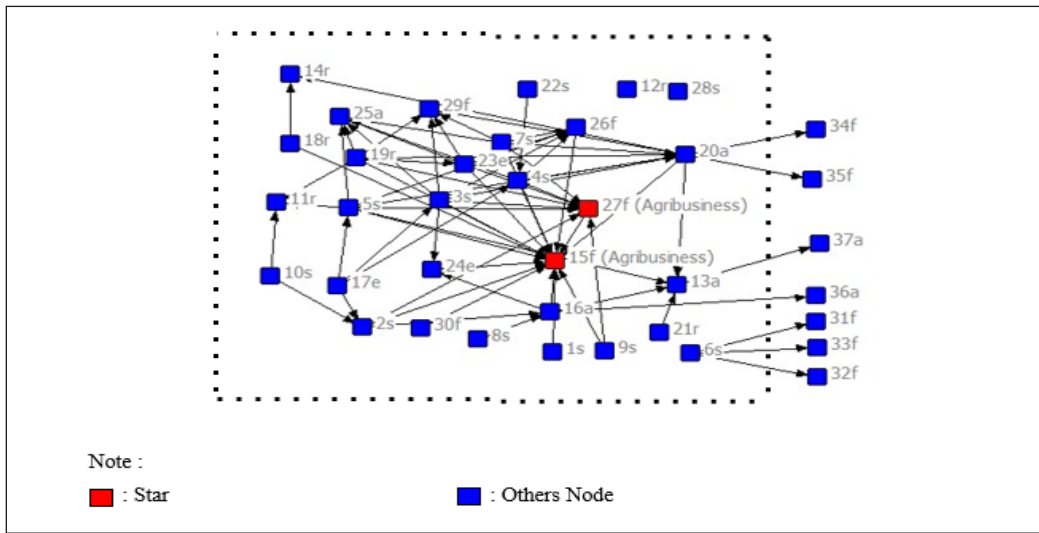
Figure 3. Communication network of orchid domestic marketing

the orchid domestic marketing field can be seen in Figure 3.

The nodes who are the stars of the orchid domestic marketing field are Nodes 15 and 27 from the agribusiness organisation. Node 15 is a marketing manager at one of the famous orchid companies in Indonesia. The media Node 15 uses to communicate with the other consortium members are email and a mailing list, at least 4 times a month. The information discussed includes consumer preferences, problems in inter-island goods shipping, and the procedures that must be passed to smooth inter-island

marketing. Node 27 is an owner at one of the famous orchid companies and he also is the member of the Indonesian Orchid Farmers Association in East Java. The media Node 27 uses to communicate with the other consortium members are email and a mailing list, at least 5 times a month. The information discussed includes consumer preferences and problems in business.

The centrality values based on the discussion topic of orchid domestic marketing in the communication network can be seen in Table 3.

The nodes that have the highest in-

Table 3

The centrality values based on orchid domestic marketing

Communication Network Analysis	Nodes	Variation Coofisien (%)	Average	Indeks Maximum	Minimum
1. Local Centrality					
a. In Degree	15,27	45.9	2.1	15	0
b. Out Degree	3,5,19	17.4	2.1	7	0
2. Global Centrality					
a. Infarness	15	-	-	-	-
b. Ourfarness	17	-			
3. Betweenness					
a. Mediator	20	2.56	-	-	-

degree value, or the stars, of the domestic orchids marketing field are Nodes 15 and 27 from the agribusiness organisations. The nodes that have the highest out-degree value in the domestic orchid marketing field are Nodes 3 and 5 from the services organisation, namely the Directorate of Floriculture and the Post-harvest, and Node 19 from BALITHI.

The range of variability is low, with an out-degree of 17.4% and an in-degree of 45.9%. That means the power of the individual agent is less varied, and there is a large number of concentration or centralisation across the network. The population is homogeneous, meaning that the marketing field is a field of expertise which is very specific so that the information is more centralised to certain people who have the expertise and experience in marketing.

Networks centrality of the orchid domestic marketing in-degree has a maximum value of 15 and a minimum of 0. While networks centrality of the orchid domestic marketing out-degree has a maximum value of 7 and a minimum of 0. This means that people who are considered the most prominent in the orchid domestic marketing networks in-degree has been linked to15 other people, and the most prominent in the orchid domestic marketing networks out-degree has been linked to 7 people. Node 15 is the marketing manager from the agribusiness organisations that handles orchid market is the most prominent in the orchid domestic marketing networks in-degree and node 5 from the services organisation, namely the Directorate of Floriculture and the Post-harvest that mostly keeps in touch with people in orchid development especially in business is the most prominent in the orchid domestic marketing networks out-degree.

The average out-degree and in-degree of 2.1 means that people who are considered in the orchid domestic marketing networks has been linked to 2 people. It means

that connectivity is low, participants communicate about marketing orchids only to the star, so the role of star becomes very important. Participants do not much share information or discuss it with members.

The global centrality of the communication network of orchid domestic marketing field shows the in-farness of Node 15 and out-farness of Node 17. It means that Node 15 from agribusiness organisation is agent most quickly contacted by other members, while Node 17 of UI is the fastest agent in regards to spreading information obtained from the information source.

The node that can act as a mediator in orchid marketing is Node 20 of the Indonesian Orchid Farmers Association (APAI). However, the betweenness centrality index is low, about 2.56%, meaning the connections can be made in this network without mediator assistance.

Communication Network of Orchid Area Development Policy field

Figure 4 shows the sociogram of the communications network structure among consortium members in the orchid area development policy field. The star agents
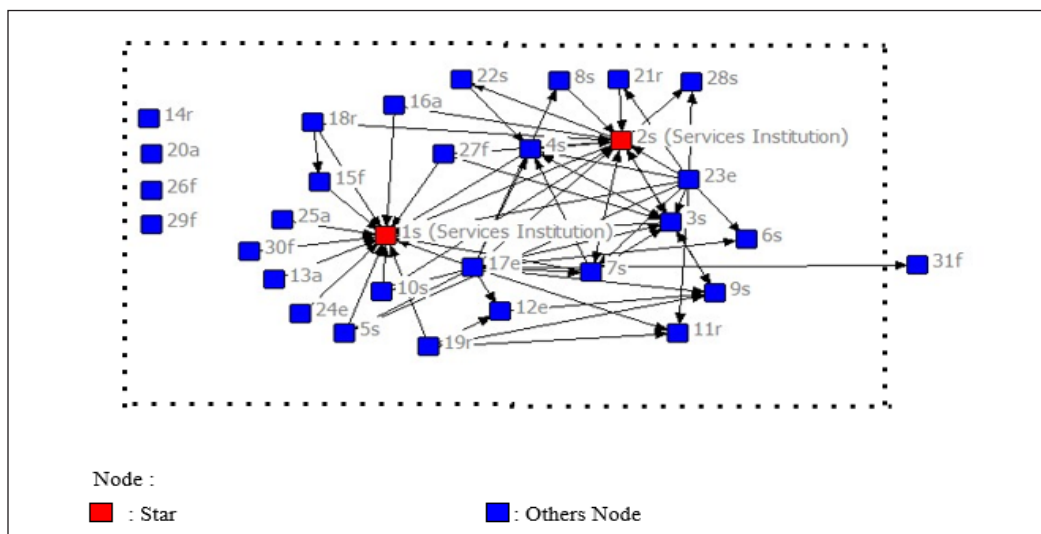
Figure 4. Communication network of orchid area development policy

on orchid area development are Agents 1 and 2 of the related orchid cultivation and post-harvest services organisation.

Node 1 is a Director of Floriculture and Post-harvest with a doctoral level education. The media that is widely used by Node 1 to communicate with other consortium members is the media for sending email and a mailing list, about three times a month.

Node 2 is the Head of the Sub-Directorate that handles orchid policy, with a formal education level of master's degree in agribusiness management. The media most widely used in communication with other consortium members is email, mailing list, SMS, and telephone. The frequency of the media use is 8 times a month for email and mailing list, and 8 times a year for telephone

and SMS. The information discussed consists of orchid area development policies, programs, support, and problems related to orchid area development.

Table 4
Centrality value of network communication on orchid area development policy field

Communication Network Analysis	Nodes	Variation Coofisien (%)	Average	Indeks Maximum	Minimum
1. Local Centrality					
a. In Degree	1,2	50.9	2.7	17	0
b. Out Degree	17	93.7	2.7	29	0
2. Global Centrality					
a. Infarness	1	-	-	-	-
b. Ourfarness	17	-			
3. Betweenness					
a. Mediator	2	7.27	-	-	-

Table 4 shows the centrality value based on the discussion topic of orchid area development policy in communication network.

Table 4 The stars of orchid area development policy field are Nodes 1 and 2 of the services organisation of the Directorate of Floriculture and the Post-harvest, which makes policies on orchid development in Indonesia. The identification results show that the information source in the field of orchid area development policy is a credible informant who has the information power and can act as an information source for other members in accordance with the functions of the represented organisation in policy development of floriculture.

Node 17 of UI has the highest out-degree value. She is the node who mostly keeps in touch with people in formulating policies on orchid area development.

The variability range for out-degree is a relative high of 93.7%, while the in-degree is still a relative low of 50.9%. It means that the individual agent's power in this field is relatively more evenly distributed throughout the network. Directorate of Floriculture and the Post-harvest as a services organisation has disseminated the policy on orchid area development to stakeholders so that the information is properly spread to the other nodes in the network. The population of the orchid area development policy field is heterogeneous because the variability of in-degree is lower than out-degree. This means that the orchid area development policy is a common or public issue.

Networks centrality of the orchid area development policy in-degree has a

maximum value of 17 and a minimum of 0. While networks centrality of the orchid area development policy out-degree has a maximum value of 29 and a minimum of 0. This means that people who are considered the most prominent in the orchid area development policy networks in-degree has been linked to17 other people, and the most prominent in the orchid area development policy networks out-degree has been linked to 29 people. Node 1 is the Director of Floriculture and Post-harvest the agribusiness organisations that handles orchid policy is the most prominent in the orchid area development policy in-degree and node 17 who mostly keeps in touch with people in formulating policies on orchid area development is the most prominent in the orchid area development policy networks out-degree.

The average out-degree and in-degree of 2.7 means that people who are considered in the orchid area development policy networks has been linked to 2 people. It means that the connectivity is low. The participants discuss the orchid area development policy only to the star, so the star's role becomes very important. The participants do not share much information or discuss the issues with other members, so there is no solid bond among members.

The global centrality of communication networks on orchid area development policy shows the in-farness of Node 1 and out-farness of Node 17. That means Node 1 of the orchid services organisation is the fastest contactable node while Node 17 of the University of Indonesia is the fastest node in disseminating information.

The node that can act as a mediator in the policy field is Node 2 of the orchid culture services organisation. Even though the betweenness centrality index is low, 7.27%, connections can be made in this network without the mediator's assistance.

The identification results of the information centre of four orchid agribusiness fields show that the orchid consortium is built by credible informants who have the power of information and can play roles as information centres for the other members in accordance with the duties and functions of the represented organisation. Wahyuni, Sumardjo, Lubis and Sadono (2016), Zulkarnain, Lubis, Satria and Hubeis(2015), Anggriyani (2014), Cindoswari (2012), Rangkuti (2009) and Saleh (2006) found that the individuals who scored as stars in a communication network were the individuals who had experience and knowledge in certain fields, had a high education level, were willing to share knowledge, and were actively involved in social groups or organisations in their surroundings.

The population in the fields of orchid clonal propagation, orchid culture SOP, and orchid marketing are homogeneous, while the population in the field of orchid area development policy is heterogeneous. This means that the specific information is more centralised towards certain people who have the needed expertise. However, general information and information related to public policy are spread throughout each population. These findings are in line

with Cindoswari (2012), in that general information on cassava, such as fertiliser and harvest yield, is more decentralised in the population, while the specific information, like pests and diseases, is more centralised.

The Orchid Consortium performance based on the communication structure within each communication network shows that members can directly contact other members to gain information without the intervention of the mediator. This means that the consortium can act as coordination media for floriculture development in Indonesia. Thus the need for information on orchid clonal propagation, orchid culture SOP, orchid area development, and the domestic market can be met by stakeholders through the enlargement of access to mailing lists and emails in the orchid communication networks. Some studies on agribusiness communication shows different patterns of communication. In vegetable agribusiness, interactive communication among farmers, field advisors, and experts is not going well (Mulyandari, 2011). In cassava agribusiness, the communication is performed verbally and face to face (Cindoswari, 2012). In beef cattle agribusiness, despite a shift to communication by media, the organisation role is not optimal. Compared with those commodities, orchid floriculture is more adequate and more interactive among stakeholders.

Orchids are a commodity with a high economic value that can be an alternative source of income for communities. It is also has potential as the centre of economic development when supported by a strong consortium communication network. The orchid agribusiness needs more attention and support from the government and other policy makers in order to ensure that orchid floriculture can be well developed and the Indonesian orchid will be popular at international level.

CONCLUSION

Every field group of orchid consortium has different stars based on the most important role within that particular population. The stars who play the most important role in each field are: 1) orchid clonal propagation: education and research and development; (2) procedure and policy: governmental service institution; and (3) marketing: agribusiness organisation.

Service organisation and education organisation are the agents who have the highest external communication, particularly since they can summon more network resources. They are also considered the most influential organisations, which means that those organisations are involved as facilitators and mediators in the organisational empowerment, attempting to increase the Indonesian orchid production, quality, added value, and competitiveness.

Based on population type, the homogeneous populations are orchid clonal propagation, orchid culture SOP, and orchid marketing. Only the population of orchid area development policy group is heterogeneous.

The range of overall degree variability is low because the coefficient of variation is still under 80%. There is an exception

for the external network local centrality of orchid area development, which has degree variability of 93.698%.

Based on the communication structure, the orchid consortium has been a good coordinator of the communication media because it was developed by very credible informants, and the network communication is direct without mediator assistance. This means that the Orchid Consortium can play the role as media coordinator in the floriculture development in Indonesia. To provide information on orchid agribusiness, such as clonal propagation, cultivation SOP, orchid area development, and domestic market, stakeholders must improve the network communication access in the consortium.

REFERENCES

Ahuja, G. (2000). Collaboration networks, structural holes, and innovation: A longitudinal study. *Administrative science quarterly*, *45*(3), 425-455.

Alwi. (2007). *Analisis tentang Sistem Jaringan Antar Organisasi dalam Penentuan Strategi Pertumbuhan Ekonomi Daerah : Studi Kasus pada Badan Pengelola Kawasan Pengembangan Ekonomi Terpadu (BP-KAPET) Pare-pare di Provinsi Sulawesi Selatan* (Dissertation). Bandung, ID: Ilmu Administrasi, Program Pasca Sarjana Universitas Padjajaran.

Amrantasi, T. S. (2008). *Strategi Komunikasi pada Pola Kemitraan ABG: Akademisi-Bisnis-Government Studi Kasus Komunikasi Korporasi pada Kementerian Negara Riset dan Teknologi* (Thesis). Depok, ID: Departemen Komunikasi. Fakultas Ilmu Sosial dan Ilmu Politik. Universitas Indonesia.

Anggriyani, E. (2014). Analisis Peran Komunikasi Anggota Kelompok dalam Jaringan Komunikasi. *Jurnal Sains Peternakan, 12*(2), 107-113.

Breidbach, C. F., Kolb, D. G., & Sirivasan, A. (2013). Connectivity in service System: Does technology-enablement impact the ability of a service system to co-create value? *Journal of Service Research, 16*(3), 428-441.

Browning, L. D., Beyer, J. M., & Shetler, J. C. (1995). Building cooperation in a competitive industry: SEMATECH and the semiconductor industry. *Academy of Management Journal*, *38*(1), 113-151.

Bulkis. (2013). *Jaringan Komunikasi dan Perilaku Petani Sayur* (Thesis). Bogor, ID: Sekolah Pascasarjana IPB.

Cindoswari, A. R. (2012). *Jaringan Komunikasi dalam penerapan teknologi produksi ubi kayu. kasus petani ubi kayu di Desa Suko Binangun, Kecamatan Way Seputih, Kabupaten Lampung Tengah, Provinsi Lampung* (Master's thesis). Bogor, ID: Sekolah Pascasarjana IPB.

Direktorat Budidaya & Pascapanen Florikultura. (2012). *Road Map Anggrek Indonesia* (pp. 20). Indonesia: Direktorat Budidaya dan Pascapanen Florikultura.

Gallupe, R. B. A. R., Dennis, W. H., Cooper, J. S., Valacich, L. M., Bastianutti, & Nunamaker, J. F. (1992). Electronic Brainstorming and Group Size. *Academy of Management Journal, 35*, 350-369.

Gandasari, D., Sarwoprasodjo, S., Ginting, B., & Susanto D. (2015). Factor affecting the effectiveness of alliance communication in orchid consortium in Indonesia. *Pertanika Journal Social Sciences & Humanities, 23*(2), 325-337

Gustina, A., Hubeis, A. V. S., & Riyanto, S. (2008). jaringan komunikasi dan peran perempuan dalam mempertahankan budaya rudat studi

pada masyarakat desa Negeri Katon, Kecamatan Negeri Katon, Lampung Selatan. *Jurnal Komunikasi Pembangunan, 6*(1), 72-89.

Handoko, J. (2008). *Faktor-faktor yang mempengaruhi kesuksesanya serta implikasinya pada keunggulan bersaing: Studi pada PT. Kahar duta sarana* (Master's thesis). Semarang, ID: Universitas Diponegoro.

Hanneman, R. A., & Riddle, M. (2005). *Introduction to social network methods*. City, California, US: University of California.

Harris, T. E. & Nelson, M. D. (2008). *Applied Organisational Communication: Theory and Practice in a Global Environment*. New York, US: Lawrence Erlbaum Associates, Taylor & Francis Group.

Kolb, D. G. (2008). Exploring the Metaphor of Connectivity: Attributes, Dimensions and Duality. *Organisation Studies, 29,* 127-144.

Leeuwis, C. (2009). *Komunikasi untuk inovasi pedesaan: Berpikir kembali tentang penyuluhan pertanian*. Jakarta, Indonesia: Kanisius.

Lubis, D. P. (2000). Commuication and Socio-Cultural Determinants of Social and Physical Adaptability among Indonesian Transmigrants (Master's thesis). Los Banos, PH: University of The Philippines.

Marigun. (2008). Pengaruh Koordinasi Antar Organisasi Perangkat Daerah dan Partisipasi Masyarakat terhadap keberhasilan Program Pembangunan Transmigrasi di Kabupaten Mamuju Provinsi Sulawesi Barat (Master's thesis). Bandung, ID: Program Pascasarjana Universitas Padjadjaran.

Minei, E., & Bisel, R. (2013). Negotiating the Meaning of Team Expertise: A Firefighter Team's Epistemic Denial. *Small Group Research, 44*(1), 7-32.

Moliterno, T. P., & Mahony, D. M. (2011).

Network theory of organization: A multilevel approach. *Journal of Management*, *37*(2), 443-467.

Monge, P., Fulk, J., Kalman, M. E., Flanagin, A. J., Parnasa, C. & Rumsey, S. (1998). Production of collective action in alliance-based interoganizational communication and information systems. *Organisation Science*, 3(Special Issue), 411-433.

Mulyandari, R. S. H. (2011*). Cyber Extention sebagai Media Komunikasi dalam Pemberdayaan Petani Sayuran* (Dissertation). Bogor, ID: Sekolah Pascasarjana IPB.

Nohria, N. (1998). *Is a Network Perspective a Useful way of Studying Organisations?* In GH Hickman (Ed.), *Leading Organisations: Perspectives for a New Era*. City, California, USA: Thousand Oaks, Sage.

Penley, L. E. (1978). Structuring a group's communication for improved problem-solving. *The Journal of Business Communication (1973)*, *16*(1), 25-37.

Rangkuti, P. A. (2009). Analisis peran jaringan komunikasi petani dalam adopsi inovasi traktor tangan di Kabupaten Cianjur, Jawa Barat. *Jurnal Agro Ekonomi, 27*(1), 45-60.

Rogers, E. M. (1976). *Communication and Development: Critical Perspectives*. Jakarta, ID: LP3ES.

Rogers, E. M. & Kincaid, D. L. (1981). *Communication Networks: Toward a New Paradigm for Research.* New York: The Free Press.

Saleh, A. (2006). *Tingkat Penggunaan Media Massa dan Peran Komunikasi Anggota Kelompok Peternak dalam Jaringan Komunikasi Penyuluhan* (Master's thesis). Bogor, ID: Sekolah Pascasarjana IPB.

Sarinastiti, N. (2004). *Communities of Practice as a Knowledge Sharing Forum (Discourse*

Analysis of Marketing & Communications Business practice at Accenture Asia-Pacific) (Master's thesis). Depok, ID: Departemen Komunikasi, Fakultas Ilmu Sosial dan Ilmu Politik, Universitas Indonesia.

Scott, J. (2000). *Sosial Networks Analysis: A hand book* (2nd ed.). City, California: SAGE Publication Inc.

Tsai, W. (2000). Social capital, strategic relatedness and the formation of intraorganizational linkages. *Strategic Management Journal*, *21*(9), 925-939.

Utami, D. (2013). *Jaringan Komunikasi Informasi Harga dan Pemasaran Sayuran* (Essay). Bogor, ID: Departemen Sains Komunikasi dan Pengembangan Masyarakat, Fakultas Ekologi Manusia, IPB.

Van den Ban, A. W. (1997). Successful agricultural extension agencies are learning organizations. In *Management of agricultural extension in global perpectives* (pp. 47-77). New Delhi, India: BR Pub. Corp.

Wahyuni, S., Sumardjo, Lubis, D. P., & Sadono, D. (2016). Communication networks of organic rice farmers in Tasikmalaya. *International Journal of Sciences: Basic and Applied Research (IJSBAR), 28,* 54-63.

Zulkarnain, Lubis, D. P., Satria A., & Hubeis, M. (2015). Jaringan komunikasi dalam kegiatan produksi dan pemasaran pada pembudidaya ikan di Kabupaten Kampar, Riau. *Jurnal Sosek, 10*(1), 115-124.

Model of the Writing Process and Strategies of EFL Proficient Student Writers: A Case Study of Indonesian Learners

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ABSTRACT

Writing in a second language (L2) is a challenging task. It is demanded in academic context and considered a lifetime skill. In Indonesia, writing is the most neglected skill in schools, resulting in low writing proficiency among university students. The aim of this study is: 1) to identify the writing process of Indonesian EFL proficient student writers; and 2) to explore the writing strategies used by Indonesian EFL proficient student writers. Williams' writing process model was used as the basis for identifying the writing process, while Leki, Sasaki and Mu's writing categories were used to identify the writing strategies. This study used the qualitative case study research design integrating four data collection methods, that was, observation, interview, think-aloud protocol and video-stimulated recall interview. The results show that the student writers undertake a five-step writing process: prewriting, planning, drafting, pausing and reading and revising and editing, utilising 10 writing strategies: mechanics of writing; relating the topic to past experience and knowledge; talk-writing; freewriting; outlining; listing; using online materials; seeking help; taking the reader into consideration; and text organisation in each stage of the writing process. The study significantly contributes to the body of knowledge on writing, helps L2 writing teachers and L2 learners at all levels of writing using the model of the writing process and the proposed writing strategies.

Keywords: English as a foreign language, proficient student writers, second language writing, writing process, writing strategies

INTRODUCTION

In exploring what elements are involved in the writing process and writing strategies, it is important to know the difference between both. The writing process as a private activity is generally known to consist of four main stages i.e. planning, drafting, revising and editing (Seow, 2002, p. 316). These stages are non-linear and recursive. Writing strategies have been referred to as "writing behaviors" (Armengol-Castells, 2001; Whalen, 1993), "composing behaviors" (Raimes, 1987) and "composing operations" (Armengol-Castells, 2001). Other terms used interchangeably are "writing techniques and procedures" (Khaldieh, 2000) and "writing process strategies" (Sasaki, 2000). In this study, the writing process is defined as a private activity that writers go through, while writing strategy refers to how second language (L2) learners go about composing a written text, that is "any actions employed in the act of producing a text" (Manchon, De Larios, & Murphy, 2007, p. 231).

The need to write effectively has increased in the academic context, whereby students are demanded to utilise this skill as a tool to demonstrate what they have learnt. Writing is considered a lifetime skill that serves three essential aims for the students: 1) to write as a form of communication to express ideas, plans, recommendations, values, and commitment; 2) to write as a form of critical thinking and problem solving, where writing helps students to think critically and confront values; and 3) to write as self-actualisation, where writing is used as a way of discovering and developing students (Stapa, 1998).

In Indonesia, where English is taught as a foreign language, English is officially taught from the secondary school to university level. However, proficiency in mastering English, especially writing, among high-school and university graduates is generally low (Lie, 2007). This might be due to the teaching of English writing, which is the most neglected skill in Indonesian schools. Alwasilah (2006) claimed that writing was taught unprofessionally by teachers and lecturers at schools and colleges because writing lessons were taught mostly through grammar and theories of writing rather than the practice of writing. Marcellino (2008) also associated the failure in teaching writing to the following aspects: the teacher's class preparations, mastery of the discussed topics, teaching learning strategies, class size and allotment time. In addition, Suriyanti and Yaacob (2016) discovered that the lack of understanding on knowledge of writing approaches and strategies contributed to the writing problem. Furthermore, in English writing instruction, the teachers applied the approach of controlled composition and current traditional rhetoric (Ignatius, 1999; Latief, 1990; Sulistyaningsih, 1997). Learning to write in English is mainly through the teacher-directed instructional approach with an emphasis on the final writing products to indicate the students' performance. Generally, students are taught vocabulary, sentence patterns and how to use conjunctive devices to connect

sentences to form a paragraph and then to connect discourses between paragraphs.

The Director General of Higher Education (DGHE), Satrio Soemantri ("The Kompas", 2002b, January 18) and the Rector of Atma Jaya Catholic University, Kridalaksana (The Kompas, 2002a, January 16) highlighted the issue of the writing skill of Indonesian university lecturers, which was still low, as being a cause of students not being taught to write complete texts either in English or Bahasa Indonesia effectively. Thus, "it is not surprising if university students and even university graduates' writing ability is categorized into low" (The Kompas, 2002a, January 16). Based on this rationale, the researchers conducted this study: 1) to identify the writing process of EFL proficient student writers; and 2) to explore the writing strategies used by EFL proficient student writers. The selection of EFL proficient student writers was considered suitable because it was believed that texts written by them would be more sophisticated in expressing their ideas and would consist of correct writing conventions as well as dissonance in order to accommodate their readers compared with that of less proficient writers (Best, 1995; Flower & Hayes, 1981b).

LITERATURE REVIEW

Models of Writing Process

From the 1980s to 2000s, models of the writing process have been developed by many scholars (Bereiter & Scardamalia, 1987; Flower & Hayes, 1981b; Kellogg,

2008; Mohamed Nor & Abd Samad, 2006; Murray, 1980; Williams, 2003; Williams, 2005). These scholars proposed that a writing process model involved many developmental levels that were not linear but recursive and cyclical in manner. This implies that writers go back and forth to reread, add, delete and modify their ideas.

In this study, the researchers adapted Williams' (2003) writing process model, which is also identified as the phase model, suggesting that the nature of writing is random or cyclic (Murray, 1980) for three reasons. First, the model suggests that a finished composition is "the result of the complex interaction of activities that include several stages of development" (Williams, 2003, p. 106). This means that in every stage of the process, writers perform activities that might be different from writer to writer. Second, the model suggests that the writing process has certain influential states such as planning, drafting and revising that are repeatedly changed as students revise drafts, plan how to edit their work and so on (Williams, 2003). Third, the model provides a description of the concurrent and repeated nature of the writing process that involves stages such as planning, drafting and editing that may happen more or less concurrently and in a continuous manner (Williams, 2003).

These characteristics in Williams (2003)'s writing process model are not evident in other models. Flower and Hayes (1981b)'s cognitive process of writing model is considered one of the most significant L1 writing theories (Hyland, 2003). Therefore,

the model is not suitable for an L2 study. Moreover, according to Hyland (2002), the process model focuses on the writer as a solitary individual engaged in the struggle to discover and communicate personal meaning, and fails to recognise writing as a social activity. The data, as the output of the writing process, show inaccuracy in interpreting how a certain text is composed. Bereiter and Scardamalia (1987)'s model is criticized for not considering the influence of context and social factors on writing as well as for being purely cognitive (Flower, 1994, as cited in Chaaban, 2010). This model of Bereiter and Scardamalia (1987) is still L1-based; thus, this model is not suitable for this L2 study.

Williams' writing process model consists of eight processes of writing: prewriting, planning, drafting, pausing, reading, revising, editing and publishing (See Table 1). Each process comprises various activities that are associated with effective writing and the recursive nature of the writing process (Williams, 2003). For instance, the prewriting stage has several different activities that may assist writers in developing ideas, such as discussion, talk-writing, free writing, journalling and metaphor building. At the planning stage, questions on audience, writer's position, aim of paper, organisation and writing convention are considered important. At the drafting stage, organising and planning the time and focusing on related ideas are influential factors for an effective drafting process. At the pausing stage, writers are recommended to reflect and reread what they have produced and how well it matches their plan. Similarly, at the reading stage, writers are required to reflect on the process during pausing. At the revising stage, writers should reflect on their role and their readers regarding the topic. Next, at the editing stage, writers should focus on sentence, punctuation, spelling and subject and predicate agreement. Finally, at the publishing stage, writers have to make their final paper freely available to the public.

Table 1
Williams' model of writing process

Process	Definition	Description
Prewriting	Generating ideas, strategies, and information for a given writing task	Prewriting activities take place before starting on the first draft of a paper. They include discussion, outlining, free writing, journalling, talk-writing, and metaphor building.
Planning	Reflecting on the material produced during prewriting to develop a plan to achieve the aim of the paper	Planning involves considering the writer's rhetorical stance, rhetorical purpose, the principal aim of the text, how these factors are interrelated and how they are connected to the information generated during prewriting. Planning also involves selecting support for the writer's claim and blocking out at least a rough organisational structure.

Table 1 *(continue)*

Process	Definition	Description
Drafting	Producing words on a computer or on paper that match (more or less) the initial plan for the work	Drafting occurs over time. Successful writers seldom try to produce an entire text in one sitting or even in one day.
Pausing	Moments when the students are not writing but instead are reflecting on what they have produced and how well it matches their plan; this usually includes reading	Pausing occurs among successful and unsuccessful writers, but they use it in different ways. Successful writers consider how well the text matches the plan, how well it is meeting audience needs and overall organisation.
Reading	Moments during pausing when the students read what they have written and compare it with their plan	Reading and writing are interrelated activities. Good readers are good writers, and vice versa. The reading that takes place during writing is crucial to the reflection process during pausing.
Revising	Literally 're-seeing' the text with the goal of making large-scale changes so that text and plan match	Revising occurs after the students have finished their first draft. It involves making changes that enhance the match between plan and text. Factors to be considered during planning include rhetorical stance and rhetorical purpose, among others. Revising almost always includes getting suggestions from friends or colleagues on how to improve the writing.
Editing	Focussing on sentence-level concerns, such as punctuation, sentence length, spelling, agreement between subjects and predicates and style	Editing occurs after revision of the work. The goal is to give the paper a professional appearance.
Publishing	Sharing the finished text with the intended audience	Publishing is not limited to getting a text printed in a journal. It includes turning a paper into a teacher, a boss or an agency.

Source: Williams (2003, pp. 106–107)

However, not all writers experience the same process or activities, because what may work for one writer might not for another. Williams (2003) suggested that all writers experience these processes to some extent. This study aimed to identify the writing process used by Indonesian EFL proficient student writers.

L2 Writing Strategies

Many studies have been conducted on the writing strategies of both L2 and L1 learners. Research into L2 writing strategies have focused on exploring what writing strategies were used by experienced writers to then provide training for less experienced writers based on those strategies (Zamel, 1983) or helping students to understand what an assignment requires of them and to help them generate ideas on how to get these ideas on paper and to organise them appropriately according to the task (Johns, 1990). There are three categories of writing strategy used as a guideline in the present

study as proposed by Leki (1995); Sasaki (2000), and Mu (2005). Another aim of this study was to explore the writing strategies used by Indonesian EFL proficient student writers.

Category of Writing Strategies (Leki, 1995). In her study on five ESL university students, Leki (1995) found 10 categories of writing strategy that were used by the participants. The 10 categories were: (1) Clarifying strategies e.g. talking to the teacher about the assignment; (2) Focusing strategies e.g. rereading the assignment several times; (3) Relying on past writing experiences – e.g. referring to past experiences in writing; (4) Taking advantage of the first language/culture e.g. accessing knowledge and experience of L1; (5) Using current experience or feedback to adjust strategies e.g. feedback given; (6)

Looking for models e.g. finding models in articles and books; (7) Using current or past ESL writing training e.g. using strategy taught in the writing class; (8) Accommodating the teacher's requirements e.g. meeting the teacher's requirements; (9) Resisting the teacher's requirements e.g. resisting the assignment by ignoring the criteria given by the teacher; (10) Managing competing demands e.g. managing course loads and cognitive loads, among others. She also found that some of the participants were more aware of their strategies than others and some took more time to move to alternative strategies when necessary. In addition, Leki (1995) suggested that these strategies are adaptable in use and allow the participants to shift from one writing strategy to another if the first one does not succeed. Table 2 displays the categories of writing strategy proposed by Leki (1995).

Table 2
Leki's categories of writing strategy

Writing Strategies	Sub-Strategies	Definition
Clarifying strategies	Talking to the teacher to understand the assignment better	Undertaking to determine and imitate what it is that English teachers would do with the task assigned and how the assigned activity would fit into professional life
	Talking to other students about the assignment	
	Asking for specific feedback on the project before doing it	
	Trying to interpret the teacher's purpose for an assignment	
Focussing strategies	Rereading the assignment several times	Concentrating on the writing task in both narrow and broad ways
	Writing out the essay exam question at the top of the essay	
	Reading books and articles in the content area	
Relying on past writing experiences	Revisiting a past experience to accomplish the writing task	Referring at one time or another to past writing experiences in the effort to accomplish the current task

Table 2 *(continue)*

Writing Strategies	Sub-Strategies	Definition
Taking advantage of L1/culture	Using the strategy that is known from previous knowledge used by others	Using knowledge and experience to compensate for other linguistic and educational disadvantages
Using current experience or feedback to adjust strategies	Using the feedback from own work or other classmates received from the teacher	Using feedback or current experience from previous assignments
Looking for models	Looking for models for the assignment	Finding models in books, articles as format or template to use
Using current or past ESL writing training	Using strategy taught in the previous writing class	Using strategies taught in the previous writing class
Accommodating teacher's requirements	Meeting the teacher's requirements	Meeting the teacher's requirements
Resisting teacher's demands	Resisting the assignment by ignoring the criteria given by the teacher	Resisting the assignment by ignoring the criteria given by the teacher
Managing competing demands	Managing course loads	Juggling the various loads the student is responsible for in order to accomplish given tasks in the time allotted
	Managing work load	
	Regulating the amount of investment made in specific assignment	
	Regulating cognitive load	
	Managing the demands of life	

Source: Leki (1995, pp. 247–253)

Categories of Writing Strategy (Sasaki, 2000). Sasaki (2000) investigated Japanese EFL learners' writing strategies and found 10 writing strategies: planning, retrieving, generating ideas, verbalising, translating, rereading, evaluating and others such as resting, questioning and impossible to categorise. Each of the categories consists of one to four sub-strategies. Table 3 displays the writing strategies, the sub-strategies and their definitions.

Table 3
Sasaki's categories of writing strategy

Writing Strategies	Sub-Strategies	Definition
Planning	Global planning	Detailed planning of overall organisation
	Thematic planning	Less detailed planning of overall organisation
	Local planning	Planning what to write next
	Organising	Organising the generated ideas
	Conclusion planning	Planning the conclusion

Table 3 *(continue)*

Writing Strategies	Sub-Strategies	Definition
Retrieving	Plan retrieving	Retrieving the already constructed plan
	Information retrieving	Retrieving appropriate information from long-term memory
Generating ideas	Naturally generated	Generating an idea without any stimulus
	Description generated	Generating an idea related to the previous description
Verbalising	Verbalising a proposition	Verbalising the content the writer intends to write
	Rhetorical refining	Refining the rhetorical aspects of an expression
	Mechanical refining	Refining the mechanical or L1/L2 grammatical aspects of an expression
	Sense of readers	Adjusting expressions for the reader
Translating	Translating	Translating the generated idea into L2
Rereading	Rereading	Rereading the already produced sentence
Evaluating	L2 proficiency evaluation	Evaluating one's own L2 proficiency
	Local text evaluation	Evaluating part of generated text
	General text evaluation	Evaluating the generated text in general
Others	Resting	Resting
	Questioning	Asking the researcher a question
	Impossible to categorise	Impossible to categorise

Source: Sasaki (2000, pp. 289–291)

Categories of Writing Strategy (Mu, 2005). A study conducted by Mu (2005) on ESL writing strategies found five broader categories and 30 ESL writing strategies (See Table 4). The broader categories were: (1) rhetorical strategies refer to the strategies that writers use to organise and to present their ideas in writing conventions acceptable to native speakers of that language; (2) metacognitive strategies refer to the strategies that the writers use to control the writing process consciously; (3) cognitive strategies refer to the strategies that writers use to implement the actual writing actions; (4) communicative strategies refer to the strategies that the writers use to express ideas in a more effective way; (5) social/ affective strategies refer to the strategies that the writers use to interact with others to clarify some questions and to regulate emotions, motivation and attitudes in their writing (Mu, 2005, p. 9; 2007, p. 2). The classification was developed from the theories of ESL writing that were combined to create a more specific classification.

Table 4
Mu's categories of writing strategy

Writing Strategies	Sub-Strategies	Speculation
Rhetorical strategies	Organising	Beginning/development/ending
	Using L1	Translate generated idea into ESL
	Formatting/Modelling	Genre consideration
	Comparing	Different rhetorical conventions
Meta-cognitive strategies	Planning	Finding focus
	Monitoring	Checking and identifying problems
	Evaluating	Reconsidering written text, goals
Cognitive strategies	Generating ideas	Repeating, lead-in, inferencing etc.
	Revising	Making changes in plan, written text
	Elaborating	Extending the content of writing
	Clarification	Dispersing confusion
	Retrieving	Getting information from memory
	Rehearsing	Trying out ideas or language
	Summarising	Synthesising what has been read
Communicative strategies	Avoidance	Avoiding problems
	Reduction	Giving up difficulties
	Sense of readers	Anticipating readers' response
Social/Affective strategies	Resourcing	Referring to libraries, dictionaries
	Getting feedback	Getting support from professors, peers
	Assigning goals	Dissolving the load of the task
	Resting/Deferring	Reducing anxiety

Source: Mu (2005, p. 9)

Previous Studies

There are many recent studies on the writing process and strategies that have been conducted in Asian countries. In this paper, the researchers include two of the most related studies. Wong (2005) investigated the writing strategies employed by four advanced L2 writers when they were composing and relating them to their mental representatives of the intended audience and the rhetorical purpose for performing the writing tasks, which appeared to correspond with the ways writing/composing strategies are employed. Moreover, they also used strategies that were not commonly found in the writing process of ESL college writers, for example, questioning as a metacognitive strategy and self-assessment as an effective strategy in order to facilitate the writing process. Wong (2005)'s research was similar to the present study in terms of looking at the writing strategies that non-native speakers of English (L2 learners) employed when they were composing and the benefits of applying the writing strategies.

A study by Mu and Carrington (2007) investigated English writing strategies of three Chinese post-graduate students in Australian higher education. The findings indicated that the three participants employed four macro writing strategies: rhetorical strategies, metacognitive strategies, cognitive strategies and social/effective strategies in their writing practice.

In relation to the metacognitive strategies, they found that the participants focused their attention on planning in English writing and they were aware that a good plan could facilitate writing. In terms of evaluating and monitoring strategies, one of the participants evaluated the resource materials she used in her assignment and adapted relevant information in her writing. In relation to generating ideas (cognitive strategies), it was found that the three participants used brainstorming to note the ideas in their mind and to decide on what ideas needed to be developed. However, the most frequently used strategy reported by the participants was reading widely, paying attention seriously to revision and imitating strategies. Mu and Carrington (2007)'s study was similar to the current study as the current study adapted Mu and Carrington (2007)'s categories of writing strategy as a model to explore the writing strategies used by the EFL Indonesian proficient writers.

A study conducted by Elshawish (2014) investigated the writing processes and writing strategies employed by fourth year EFL Libyan University students majoring in English. The study adopted a number of research methods such as think-aloud protocols, semi-structured interviews and observations. Fourteen participants were involved in the study, and among them were good writers, poor writers and teacher informants. The study found that the writing process, of planning, drafting and reviewing, was recursive in nature. It also found that various main writing strategies such as planning (global and local), rehearsing, drafting, scanning and revising existed and occurred frequently throughout the writing process. The study was similar to the present study in terms of the recursive nature of the writing process and the varieties of writing strategy that were employed throughout the writing process.

Some studies in Asian countries found that students of teachers who emphasise more than one process writing strategy have greater writing ability. For instance, Ho (2006) conducted her research on six teachers of lower and upper primary school levels to investigate the effectiveness of the writing process by implementing a two-month process writing programme in their schools. She found that the programme yielded positive results across all the classes. The process approach was proven to be an effective approach even at the lower primary school level. Research conducted by Meeampol (2005) on the use of the process-based approach found that the students who used the process-based approach had outperformed their peers who did not use the process-based approach; therefore, the approach could help the students to write better and boost their confidence. Puengpipattrakul (2014), who investigated the students' opinion of how the process approach helped to develop the writing skill of 24 undergraduate students, also found that the process approach was viewed as a useful means for developing the students' writing skill. In conclusion, the writing process approach seemed to be a feasible solution to enhancing the writing skill and confidence of students.

METHODS

The present study used the qualitative approach as it allowed the researchers to explore the writing strategies used by proficient student writers. The method applied in this study was inductive in nature and based on the study findings and the researchers' experiences (Cohen, Manion, & Morrison, 2007; Creswell, 2014). In order to understand the participants' point of view, the study used the case study research design and integrated four data collection methods: observation, interview, think-aloud protocol and video-stimulated recall interview.

Observation

The purpose of conducting observations in this study was to capture the natural surroundings of events, reactions and behaviours of the student writers when they were writing their essay in the classroom. Thus, the researchers took a passive role in the class as a non-participant observer to "know what is happening, to see it, to hear it, to try to make sense of it, which is more important than getting the perfect note or quote" (Stake, 2010, p. 94). In observing the participants, the researchers videotaped the writing activities and took field notes. After each observation session, the researchers read thoroughly the observation notes and searched the data for patterns as well as for themes. For each participant, the researchers identified the writing process stages and wrote in detail the strategies and behaviours of the participants that occurred during the observation.

Think-Aloud Protocol

A protocol is a "description of the activities, ordered in time, in which a participant engages while performing a task" (Hayes & Flower, 1980, p. 4). According to Swain (2006, p. 99), thinking aloud is a "trace of cognitive processes that people attend to while doing a task." This implies that think-aloud is perceived as a window into cognitive processing and can be utilised as a data collection technique (Bowles, 2010). In this study, the participants were asked to speak aloud everything that was occurring in their mind while writing the essay, no matter how trivial it may seem. In order for the participants to understand the think-aloud protocols, this technique was introduced to them in advance so that they could practise the protocol a few times before writing the actual task. During the think-aloud, the researchers actively participated in terms of explaining the instructions about the technique and kept reminding the participants, as necessary, to keep talking while performing the writing task. In addition, the participants were recorded using a video camera to think aloud as they were composing, so that the resulting protocols could be analysed. The protocol was conducted with each student individually one at a time. Each participant was given 60 minutes to compose an essay. The researchers identified the stages of the writing process that the participants used and the writing strategies they employed to complete their writing task.

In-Depth Interview

According to Denzin and Lincoln (1994), interviewing is a significant method for understanding a person's perspective of how he or she constructs meaning and is also a means for arriving at thick description. In this study, in-depth interviews were conducted with the participants using 20 semi-structured interview questions to understand in detail their experience of applying the writing strategies. The interview session took about 20 to 30 minutes for each participant and was recorded using a video camera, voice recorder and note taking. In analysing the interview data, the researchers followed some steps suggested by Cohen et al. (2007), and adapted from Alhosani (2008). The steps were: (1) transcribing the recorded interviews as soon as the researchers finished the interview; (2) reading the interview transcripts carefully, repeatedly and then coding, classifying and categorising the responses to the interview questions; (3) looking at repetition of words, phrases and sentences; (4) drawing conclusions and verification of data where the data were displayed and interpreted.

Video-Stimulated Recall Interview

Video-Stimulated Recall Interview (VRSI) is a method of eliciting data about the thinking process involved in carrying out a task or activity (Gass & Mackey, 2013). It has been used in studies on cognitive strategies, language learning processes and teacher behaviour (Lyle, 2003). VSRI can be regarded as another strategy, which triangulates the data and the research instrument to obtain the trustworthiness and credibility of research design (Dornyei, 2007). The use of VSRI in this study enabled the researchers to capture the participants' thinking process in terms of their actions or beliefs (Stough, 2001). To prevent a memory gap, the VSRI sessions were conducted within the next two or three days after the recording as suggested by Dornyei (2007); Gass and Mackey (2013). The interviews were recorded using a video camera and a voice recorder. The questions for the VSR interviews were specific and derived from the data recorded during the think-aloud protocol and from the observation and the interviews, such as "Before you start writing your ideas you reread the whole of paragraph 1; Why, and what were you looking for?"

Participants and Setting

Harding (2013) stated that in a case study, the selection of participants is adaptable once field work has started. To be more specific, selecting extreme or deviant cases was the approach used because the researchers intended to select "sampling the extremities that may give best understanding of the field as a whole (Harding, 2013, p. 17). The selection and the number of participants were defined once the field work started. Therefore, gender of the participants was insignificant and did not affect the findings of this study. Thus, a small number of participants was sufficient according to the approach of selecting extreme or deviant

cases and the criteria that were determined by the researchers.

The study was conducted at the Faculty of Cultural Sciences, Hasanuddin University, Makassar, Indonesia. The participants were selected from the English Language Studies Programme. They were Master's degree students in their third semester. The proficient postgraduate students were selected as participants for this study through careful consideration based on the following criteria: (1) They had achieved a score of 31 and above in the preliminary writing task; (2) They were considered to be competent in English writing, having completed the Academic Writing and Research Methodology courses; (3) They had written an unpublished thesis for their Bachelor's degree and they would be writing their Master's thesis in English as a prerequisite to completing their Master's degree; (4) They had been teaching English as teachers or tutors for more than two years.

In selecting the proficient student writers as participants, the researchers conducted a preliminary test using the International English Language Testing System (IELTS) Writing Task 2. IELTS was chosen because it is known as an international standardised test of English language proficiency for non-native English speakers. It is also commonly used in universities in Indonesia. Thus, the students were familiar with the test. The first topic or the preliminary writing task was aimed at selecting the proficient student writers for this study. The topic was: "In the last 20 years, the assessment of students has undergone major transformation. Many

educational institutions no longer use formal examinations as a means of assessment as they believe formal examination results are an unfair indication of a student's ability. To what extent do you agree or disagree with this statement?" (Taken from IELTS Preparation by Tucker and Van Bemmel, 2002). The results of the writing tasks were collected and graded by the researchers and two inter-raters. From the 80 students who participated in the preliminary writing task, the researchers found only seven students who obtained a score above 31 based on the Six-Trait Writing Rubric. According to Spandel (2009), the Six-Trait Writing Rubric has descriptors, where a score of 5-18 is categorised as Beginner writers, 19-30 as Moderate writers and 31 and above as Proficient writers. Thus, the seven students were selected as participants for the study because the score that they obtained, that is above 31, fell into the proficient writer category. However, from the seven students, only six were willing to participate in this study.

After the researchers had selected the participants, the next topic given was: "Children below sixteen should not be allowed in public places after midnight unless they are accompanied by an adult who is responsible for them. How far do you agree with this suggestion?" (Taken from IELTS Preparation, Tucker and Van Bemmel, 2002). The purpose of the second topic was to confirm the level of writing proficiency of the participants as well as to provide an opportunity for detailed analysis. The second essay was given during the

think-aloud protocol, where the researchers observed the participants while writing, and the essays were included in the analysis of the writing samples. The writing tasks were evaluated on six traits: Idea & Content, Organisation, Voice, Word Choice, Sentence Fluency and Convention (See Appendix A). Each trait was rewarded 6 points. The total score for each writing sample was 36 points. The selected participants of this study were one male student referred to as Erza (pseudonym) and five female students, referred to as Prita, Dani, Norma, Suka and Irza (pseudonyms). A detailed description of the profile of the participants, including their score in the preliminary and second writing task, is presented in Appendix B.

RESULTS AND DISCUSSION

The Writing Process and Activities

The first objective of this study was to identify the stages of the writing process. It was found that the Indonesian EFL student writers went through five stages of the writing process: prewriting, planning, drafting, pausing and reading and revising and editing that were used recursively and that occurred simultaneously with each other.

The first main theme that was identified from the writing process was the prewriting stage. It can be divided into four activities or sub-themes: 1) outlining, performed by Prita and Dani; 2) listing, done by Irza and Suka; 3) talk-writing, used by Erza; and 4) free writing, performed by Norma. The second main theme that was identified in relation to the writing process was the

planning stage. This theme is divided into two activities or sub-themes: 1) having the reader in mind, performed by Norma; and 2) choosing appropriate organisation, done by Prita, Dani and Irza. It was found that out of the six participants, only four carried out the planning stage. The other two, Erza and Suka, skipped this stage because they claimed that the planning stage would take more their time to complete the composition task.

The third main theme derived from the writing process was the drafting stage. All the six participants carried out this stage by writing three paragraphs for the composition: the introduction, body and conclusion. The fourth main theme that was identified in relation to the writing process was pausing and reading, which occurred simultaneously at this stage. This stage is divided into two activities or sub-themes: 1) pausing to reread what had been written and trying to get more ideas; and 2) pausing when the writer has run out of ideas. All the participants carried out the pausing and reading stage.

The last main theme that was identified from the writing process was revising and editing, which occurred simultaneously at this stage. This stage is divided into two activities or sub-themes, namely: 1) correcting immediately by adding and deleting ideas, performed by all the six participants; and 2) proofreading, performed by Erza and Prita. Table 5 displays the writing process identified from the present study.

Table 6 displays the writing process that

Table 5
Identification of the writing process stages

Process	Sub-Process	Definition
Prewriting	Outlining Listing Talk-Writing Freewriting	Generating ideas, strategies and information for a given writing task
Planning	Thinking about the readers and organisation Going back to the prewriting list by rereading it several times and choosing the most appropriate organisation	Reflecting on the prewriting to develop a plan to achieve the aim of the task
Drafting	Writing introduction, body, and conclusion paragraphs	Producing words on a computer or on paper that match (more or less) the initial plan of the task
Pausing and Reading	Pausing for rereading what has been written and searching for more ideas Pausing when running out of ideas	Moments when the participants are not writing but instead are reflecting on what they have produced and how well it matches their plan; Usually includes reading
Revising and Editing	Correcting immediately by adding and deleting ideas Proofreading	Rereading the text they have produced and making changes in the plan and ideas, and searching for errors in punctuation, spelling and grammar

the participants in this study experienced while writing compared with the writing process proposed by Williams (2003).

The writing process discovered by

Table 6
Writing process proposed by Williams (2003) compared with the present study

Williams (2003)	Present Study
Prewriting: Discussion, freewriting, talk-writing, journalling, metaphor building	Prewriting: Talk-writing, freewriting, outlining, listing
Planning: Questions about readers, writer's position, aim of paper, organisation and writing conventions	Planning: Thinking about the readers and organisation, thinking about the prewriting list and organisation
Drafting: Organise and plan the time Focussing on relating ideas	Drafting: Writing introduction, body and conclusion paragraphs
Pausing: Reflecting and rereading what have been produced and how well it matches their plan Reading: Reflect the process during pausing	Pausing and reading: Pausing for rereading what has been written and thinking about more ideas, Pausing when running out of ideas

Table 6 *(continue)*

Williams (2003)	Present Study
Revising: Making changes to match the plan and the text	Revising and Editing: Correcting immediately by adding and deleting ideas, Proofreading
Editing: Sentence, punctuation, spelling, subject and predicate agreement	
Publishing: Submitting paper to a teacher, boss or agency	

the present study consisted of five stages compared with Williams (2003), which consisted of eight stages. The present study found that pausing and reading occurred simultaneously at the same stage instead of at two different stages. Similarly, revising and editing occurred at the same time instead of at two different stages. For example, at the pausing and reading stage, the participants paused and read at the same time, as they paused to reread what they had written. The participants revised and edited their work at the same time by immediately deleting, adding and correcting any errors they found. In summary, the findings indicated that every student writer had different preferences as they worked their way through the stages of the writing process. It also suggested that the writing process stages are flexible, allowing the students to move from one stage to another by performing different activities that they preferred. Although the participants received high scores, they realised that writing is a process of organising their ideas in written form. The findings of this study were similar to those of Farrell (2006); Hughey, Wormuth, Hartfiel and Jacobs (1983); Raimes (1985), who all concluded

that writing is a process of discovering one's thought by reflecting on the purpose and audience, consulting their own background knowledge, letting their ideas develop and reading over what they had written to relate to their plan. This process is recursive in nature, as it is a "cyclical process during which writers move back and forth on a continuum discovering, analysing and synthesising ideas" (Hughey, Wormuth, Hartfiel, & Jacobs, 1983, p. 28).

The writing process generally consists of prewriting, drafting, revising and editing. Some studies found that the students shuttled back and forth among these processes (El-Aswad, 2002; Flower & Hayes, 1981a; Raimes, 1985). The same finding was also reported in different EFL/ESL writing studies (Alhosani, 2008; Alhaisoni, 2012; El Mortaji 2001; Elshawish, 2014; Humes, 1983; Raimes 1985, 1987; Zamel 1982, 1983). Before the process model was brought into practice, according to Pritchard and Honeycutt (2006), prewriting was not more than a brief instruction from the teacher on the topic on which the students were supposed to write. However, now teachers implement prewriting as a strategy to improve students' writing content and

to help them organise their written text (Alhosani, 2008).

Strategies of Writing

The second research objective dealt with identifying the strategies that the proficient student writers employed in their process of writing. Table 7 shows the strategies of writing that were identified in this study. The findings showed that the participants employed some writing strategies in the process of writing as listed and explained below:

1. Focusing on Mechanics of Writing. This technique occurred in the editing stage. All of the participants made the same effort to check their work for correct use of grammar, punctuation and spelling by rereading carefully, word by word, what they had written. When they spotted a mistake, they changed it immediately.

2. Relating the Topic to Past Experience and Knowledge. This technique occurred in the drafting and planning stages. In providing the details to support their arguments, the participants tried to relate the topic to their past experience and knowledge. It is important to note here that relating the topic to the participants' past experience made them write smoothly in communicating their ideas. Erza explained that relating to the past experience was like retelling a story; thus, it was easier for him to put his experience into words instead of writing from scratch.

3. Talk-writing. This involves constructing a plan mentally and delivering a verbally planned piece of writing. When given a topic to write about, Erza started by constructing his plan verbally including brainstorming and organising the paragraphs verbally at the prewriting stage. He began by saying out the major points that he wanted to address in his writing. He constructed four outlines verbally and continued to develop the outlines into paragraphs.

4. Freewriting. This strategy is intended to force writers to put aside concerns about audience, aims, organisation and structure while they consider potential ideas (Williams, 2003). It involves writing nonstop for five, 10 or 15 minutes. During freewriting, the writers would generate ideas or words with the intention of producing ideas for later development. Norma did the freewriting activity for a few minutes, then continued to write the paragraph based on the ideas that had occurred to her during the freewriting activity. This activity occurred before the writers began to write each paragraph. Norma wrote three paragraphs in her composition. Thus, in her model, freewriting occurred three times throughout the writing process. Norma explained that freewriting helped her to plan her paragraphs. As she wrote the first paragraph, she would also think about the second and the third paragraphs. Thus, freewriting helped her to keep track of her ideas for each paragraph.

5. Outlining. This begins when writers list the major points that they want to address in their writing without worrying much about order (Williams, 2003). For Prita, Suka and Dani, the outlining technique was used in the prewriting and planning stage. After receiving the topic, Prita, Suka and Dani started the prewriting stage by brainstorming their ideas. To make it easier for them to remember the ideas, they wrote all of them down on a piece of paper. Then they wrote outlines restating each paragraph in their writing. For instance, when Prita and Suka finished their prewriting, they continued expanding their outlines by writing the words brainstormed earlier under the correct outline. Below each outline, they wrote the supporting details to strengthen their arguments.

6. Listing. Listing is a type of prewriting strategy that allows writers to explore their ideas. Irza generated her ideas through listing. She performed listing by mapping her ideas in a drawing. She made four categories, then linked them to sub-categories or ideas. Each category consisted of four to five ideas. She generated ideas based on the topic. The mind map helped her to see the main ideas and supporting details she had jotted down, and this helped her to decide how to organise her paper. Listing is part of the planning stage.

7. Using Online Materials. Erza and Norma relied on their gadgets such as laptop, tablet and smartphone whenever they ran into difficulties or ran out of ideas. For instance, Erza paused several times when he could not find a word in English. He usually searched for an appropriate word using an online dictionary.

8. Seeking Help. Prita and Irza were active learners. They could not sit still when they got stuck or run out of ideas. Among the participants, only Prita and Irza asked the researchers questions when something unclear needed explanation. For instance, when Prita could not remember the spelling of 'surveillance', 'juvenile' and 'delinquency', she asked the researchers for the correct spelling.

9. Taking the Readers into Consideration. This technique occurred in the planning stage. The technique was used by Prita, Suka and Irza. In planning their writing, they thought about their readers and made sure that the vocabulary they used would be understood by their readers and that their readers would find the piece interesting. They frequently reread the task to make sure the writing matched their plan.

10. Text Organisation. Norma, Suka and Dani kept their written paper organised. They used different sheets of papers to do their prewriting activity and the actual composition. When they had finished editing and revising, they wrote their second draft on another piece of paper. On their second draft, they made sure that their handwritten copy was neat and easy to read. Norma and Dani wrote their second draft with some changes, while Suka did not make

any corrections on the second draft. Table 7 shows the writing strategies identified in the present study.

Table 8 illustrates the writing strategies that the participants used while writing compared with the writing strategies proposed by Leki (1995); Mu (2005); Sasaki (2000).

Table 7
Writing strategies used in this study

Themes	Participants
Mechanics of writing	All of the participants
Relating the topic to past experience and knowledge	All of the participants
Talk-Writing	Erza
Freewriting	Norma
Outlining	Prita, Dani
Listing	Irza, Suka
Using online materials	Erza
Seeking help	Prita, Irza
Taking readers into consideration	Prita, Suka, Irza
Organising text	Norma, Suka, Dani

Table 8
Writing strategies proposed by Leki (1995); Mu (2005) Sasaki (2000) compared with those used in the present study

Leki (1995)	Sasaki (2000)	Mu (2005)	Present Study
Clarifying strategies	Planning	Rhetorical strategies	Mechanics of writing
Focussing strategies	Retrieving	Meta-Cognitive strategies	Relating the topic to past experience and knowledge
Relying on past writing experiences	Generating Ideas	Cognitive strategies	Talk-Writing
Taking advantage of L1/culture	Verbalizing	Communicative strategies	Freewriting
Using current experience or feedback to adjust strategies	Translating	Social/Affective strategies	Outlining
Clarifying strategies	Rereading		Listing
Looking for models	Evaluating		Using online materials
Using current or past ESL writing training	Others		Seeking help
Accommodating teacher's requirements			Taking readers into consideration
Resisting teacher's requirements			Text organisation
Managing competing requirements			

Model of Writing Process and Writing Strategies

According to Miles and Huberman (1994, p. 18), a conceptual framework or conceptual model (Williams, 2008), is "a visual written product, that explained, graphically or narratively , and the presumed relationship among them". They also suggested that the conceptual framework could emerge from theory or experience and often from the objectives of the study that are developed out of field work and the development of themes. It is best described graphically with arrows that show relationships between each aspect. Thus, the model of the writing process and writing strategies (See Figure 1) that is proposed in this study was the result of analysing and developing themes from the data. It also displays the objectives of

the study. The writing process stages and strategies found in this study were non-linear and recursive. Five stages were found in the writing process: 1) prewriting, 2) planning, 3) drafting, 4) pausing and reading, and 5) revising and editing. Each stage consisted of different strategies performed by the participants.

The proposed model of the writing process and writing strategies (See Figure 1) also shows that the participants used various strategies at each stage of the writing process as they completed the task. For example, at the prewriting stage, the strategies such as outlining, listing, talk-writing and freewriting were used. Then, the participants continued with the planning stage, where strategies such as taking the reader into consideration, occurred. Next,
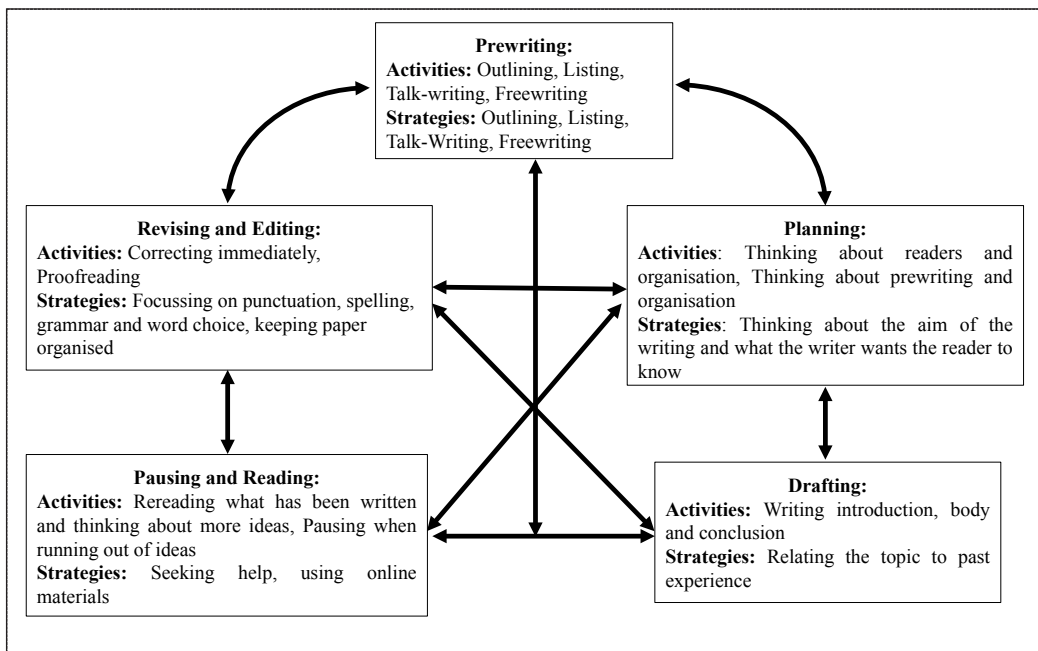
Figure 1. Writing process and writing strategies model proposed

was the drafting stage, where the participants started to draft their points into paragraphs. Strategies such as relating the topic to past experience occurred at this stage. When the participants ran out of ideas, they paused and read. At this stage, strategies such as seeking help and using online materials were used. Pausing and reading occurred simultaneously at the same stages, which was characterised by moments of silence for the participants to read over what they had written. Revising and editing also occurred simultaneously at the same stage and was done in silence as the participants paused and read what they had written. Strategies such as focusing on the mechanics of writing and text organisation that required adding and deleting some ideas was observed to be done at this stage.

Contributions, Limitations and Recommendations of the Study

This study has significantly contributed to the literature, especially in the areas of the writing process and writing strategies in English as a Foreign Language (EFL) and in the teaching of writing. Although the importance of effective writing is acknowledged globally, models of an effective writing process are limited. This study has attempted to fill the gap by proposing a model of the writing process and writing strategies. This study has also contributed to the body of knowledge on teaching through the model of an effective writing process and writing strategies proposed for writing teachers to use as a guideline in their classes, as well as for policy-makers in helping them to design and implement a suitable curriculum on teaching writing in Indonesia. The study is beneficial for non-proficient students who seek to become more competent in writing in English by adopting, modifying and applying the strategies that suit them best and using these strategies to develop their writing skill.

Although the study has contributed to the field of writing research, there are also some limitations. Only six students were selected for this study because they fit into the proficient writer category after sitting an IELTS-type writing test. In addition, the study only focused on what the participants were doing when writing the composition in order to explore the use of writing strategies but not on how proficient were the writers. Finally, in collecting observation data, the researchers later found that the participants no longer had writing activities in their classes; thus, the researchers had to adapt to the situation and decided to collect observation data at the same time as the think-aloud protocol.

Based on the findings of this study, some recommendations for further research are made. First, the researchers recommends that future studies include non-proficient student writers. Second, the researchers recommends that students who come from different cultural backgrounds and who use different languages be included as they may have a different understanding of writing and therefore, may use different writing strategies. For further research, exploring the effects of utilising the writing process

on writing development of a large sample of students from different countries would add richness and depth to the findings.

CONCLUSION

The writing process is recursive in nature, whereby the writer moves from one stage to another, perhaps going back to the beginning or the previous stage through a natural occurrence. The purpose of this study was to identify the writing process and to explore the writing strategies used by EFL proficient student writers when writing a composition so that other students could benefit from their skill and expertise. The findings showed that the proficient student writers were familiar with the writing stages. Five stages of the writing process were found: prewriting, planning, drafting, pausing and reading and revising and editing. The findings also showed that when doing a writing task, the participants used various strategies such as mechanics of writing, relating the topic to past experience and knowledge, talk-writing, freewriting, outlining, listing, and using online materials, seeking help, taking the reader into consideration and text organisation. The present study contributes to the body of literature in the areas of the writing process and writing strategies in EFL teaching, learning and policy-making.

REFERENCES

Alhaisoni, E. (2012). A think-aloud protocols investigation of Saudi English major students' writing revision strategies in L1 (Arabic) and L2 (English). *English Language Teaching, 5*(9), 144–154.

Alhosani, N. M. (2008). *Utilizing the writing process approach with English as a second language writers: A case study of five fifth grade of ESL Arab students* (Doctoral dissertation), Kansas State University, United States.

Alwasilah, A. C. (2001). Writing is neglected in our school. In C. A. Alwasilah (Ed), *Language, culture and education*. Bandung: Andira.

Alwasilah, A. C. (2006). Developing theories of teaching academic Indonesian to non-language majors: Ways of collecting and analyzing data. *Indonesian Journal of English Language Teaching, 2*(1), 125–136. Retrieved December 10, 2016, from http://ojs.atmajaya.ac.id/index.php/ijelt/article/view/109/68

Armengol-Castells, L. (2001). Text-generating strategies of three multilingual writers: A protocol-based study. *Language Awareness, 10*(2-3), 91–106. doi: 10.1080/09658410108667028.

Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Lawrence Erlbaum.

Best, L. (1995). *A critique of cognitive research on writing from three critical perspectives: Theoretical, methodological, and practical*. ERIC Document Retrieval Service No.377 516.

Bowles, M. A. (2010). *The think-aloud controversy in second language research*. New York: Routledge

Cohen, L., Manion, L., & Morrison, K. (2007). *Research method in education*. UK: Routledge.

Creswell, J. W. (2014). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). Essex, UK: Pearson Education Limited.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (1994). *Handbook of qualitative research*. Thousand Oaks, CA: Sage.

Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford: Oxford University Press.

El-Aswad, A. (2002). *A study of the L1 and L2 writing processes and strategies of Arab learners with special reference to third-year Libyan university students* (Unpublished PhD Dissertation), University of Newcastle, Australia.

El-Mortaji, L. (2001). *Writing ability and strategies in two discourse types: A cognitive study of multilingual Moroccan university students writing in Arabic (L1) and English (L3)* (Doctoral dissertation), University of Essex, UK.

Elshawish, M., F. (2014). *Investigating the writing strategies of fourth year Libyan University students of English: Strategy differences between good and poor writers of English* (Unpublished PhD Dissertation), Nottingham Trent University, Nottingham, UK.

Farrell, T. S. C. (2006). *Succeeding with English language learners: A guide for beginning teachers.* Thousand Oaks, CA: Corwin Press.

Flower, L., & Hayes, J. (1981a). Plans that guide the composing process. In C. Frederiksen & J. Dominic (Eds), *Writing: The nature, development and teaching of writing communication* (pp. 39–58). Hillsdale, NJ: Lawrence Erlbaum.

Flower, L. S., & Hayes, J. R. (1981b). A cognitive process theory of writing. *College Composition and Communication, 32*, 365–387. Retrieved December 10, 2016, http://www.jstor.org/stable/356600

Gass, S. M., & Mackey, A. (2013). *Stimulated recall methodology in second language research*. Mahwah, NJ: Lawrence Erlbaum Associates.

Harding, J. (2013). *Qualitative data analysis from start to finish*. London: Sage.

Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In L.W. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing* (pp. 31–50). Hilldale, NJ: Lawrence Erlbaum Associates.

Ho, B. (2006). Effectiveness of using the process approach to teach writing in six Hong Kong primary classrooms. *Working Papers in English and Communication, 17*(1), 1–52. ERIC Document Retrieval Service ERIC No. EJ847597.

Hughey, J. B., Wormuth, D. R., Hartfiel, V. F., & Jacobs, H. (1983). *Teaching ESL composition: Principles and techniques*. Rowley, MA: Newbury House Publishers, Inc.

Humes, A. (1983). Research on the composing process. *Review of Educational Research, 53*(2), 201–216.

Hyland, K. (2002). Authority and invisibility: Authorial identity in academic writing. *Journal of Pragmatics*, *34*(8), 1091–1112.

Ignatius, H. (1999). *English academic writing features by Indonesian learners of English* (Unpublished doctoral dissertation), State University of Malang, Malang, Indonesia.

Johns, A. M. (1990). L1 composition theories: Implications for developing theories of L2 composition. In B. Kroll (Ed.), *Second language writing: Research insights for the classroom* (pp. 24–36). New York, NY: Cambridge University Press.

Kellogg, R. T. (2008). Training writing skills: A cognitive developmental perspective. *Journal of Writing Research*, *1*(1), 1–26. Retrieved December 10, 2016, http://dl.ueb.vnu.edu.vn/handle/1247/9999

Khaldieh, S. A. (2000). Learning strategies and writing processes of proficient vs. less proficient learners of Arabic. *Foreign Language Annuals*,

33(5), 522–533. doi: 10.1111/j.1944-9720.2000.tb01996.x

Kompas, The. (2002a). *Soal tidak ada universitas riset. Kemampuan menulis para dosen masih minim* [The issue of the lack of university research: Writing skill lectures are still at minimum stage]. Jakarta: Kompas. Dikbud. Retrieved January 16, 2002 from http://www.kompas.com/kompas-cetak/0201/16/DIKBUD/kema09.htm.

Kompas, The. (2002b). *Komunitas peneliti belum berkembang di Universitas* [Undeveloped research community at universities. Retrieved January 18, 2002 from http://www.kompas.com/kompascetak/0201/18/DIKBUD/kema09.htm

Latief, M. A. (1990). *Assessment of English writing skills for students of English as a foreign language at the Institute of Teacher Training and Education IKIP Malang, Indonesia* (Doctoral dissertation, University of Iowa, USA). Retrieved December 10, 2016, from ProQuest Dissertation and Thesis.

Leki, I. (1995). Coping strategies of ESL students in writing tasks across the curriculum. *TESOL Quarterly, 29*(2), 235–260. Retrieved December 10, 2016, http://www.jstor.org/stable/3587624

Lie, A. (2007). Education policy and EFL curriculum in Indonesia: Between the commitment to competence and the quest for higher test scores. *TEFLIN Journal, 18*(1), 1–15. Retrieved December 10, 2016, http://dx.doi.org/10.15639/teflinjournal.v18i1

Lyle, J. (2003). Stimulated recall: A report on its use in naturalistic research. *British Educational Research Journal, 29*(6), 861–878. Retrieved December 10, 2016, http://www.jstor.org/stable/1502138

Manchón, R. J., De Larios, J. R., & Murphy, L. (2000). An approximation to the study of backtracking in L2 writing. *Learning and Instruction 10,* 13–35.

Retrieved December 10, 2016, http://dx.doi.org/10.1016/S0959-4752(99)00016-X

Marcellino, M. (2008). English language teaching in Indonesia: A continuous challenge in education and cultural diversity. *TEFLIN Journal, 19*(1), 57–69. Retrieved December 10, 2016, http://journal.teflin.org/index.php/journal/article/viewFile/99/93

Meeampol, S. (2005). A study of the effectiveness of the process-based writing in an EFL classroom of second-year students at Bangkok University. *BU Academic Review*, *4*(2), 1–7. Retrieved December 10, 2016, http://www.bu.ac.th/knowledgecenter/epaper/july_dec2005/sutilak.pdf

Megaiab, M. M. A. (2014). The English writing competence of the students of an Indonesian senior high school. Paper presented at *the WEI International Academic Conference, Bali, Indonesia.* Retrieved December 10, 2016, from http://www.westeastinstitute.com/wp-content/uploads/2014/06/Machalla-M.A.-Megaiab-Full-Paper.pdf

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). London, UK: Sage Publications, Inc.

Mohamed Nor, M., & Abd Samad, R. (2006). *Teaching of reading and writing for ESL.* Malaysia: University of Malaya Press.

Mu, C. (2005). A taxonomy of ESL writing strategies. Proceedings from *Redesigning Pedagogy: Research, Policy, Practice* (pp. 1–10), Singapore. Retrieved December 10, 2016, http://conference.nie.edu.sg/paper/html/index.htm

Mu, C., & Carrington, S. B. (2007). An investigation of three Chinese students' English writing strategies. *Teaching English as a Second or Foreign Language-EJ*, *11* (1), 1–23. Retrieved December 10, 2016, http://eprints.qut.edu.au/13130/

Murray, D. (1980). Writing as a process. In T. R. Donaovan & V. W. McClelland (Eds.), *Eight approaches to teaching composition* (pp. 3–20). Urbana, IL: National Council of Teachers of English.

Puengpipattrakul, W. (2014). A process approach to writing to develop Thai EFL students' socio-cognitive skill. *Electronic Journal of Foreign Language Teaching, 11*(2), 270–284. Center for Language Studies, National University of Singapore. Retrieved December 10, 2016, http://e-flt.nus.edu.sg/v11n22014/puengpipattrakul.pdf

Raimes, A. (1985). What unskilled ESL students do as they write: A classroom study of composing. *TESOL Quarterly*, *19*(2), 229–258. doi: 10.2307/3586828

Raimes, A. (1987). Language proficiency, writing ability, and composing strategies: A study of ESL college student writers. *Language Learning, 37*(3), 439–468.

Sasaki, M. (2000). Toward an empirical model of EFL writing processes: An exploratory study. *Journal of second language writing*, *9*(3), 259–291. Retrieved December 10, 2016, http://dx.doi.org/10.1016/S1060-3743(00)00028-X

Seow, A. (2002). The writing process and process writing. In J. C. Richard & W. A. Renandya (Eds.), *Methodology in language teaching: An anthology of current practice* (pp. 315–320). Edinburgh, UK: Cambridge University Press.

Spandel, V. (2009). *Creating writers: Through 6-trait writing assessment and instruction*. Boston: Pearson.

Stake, R., E. (2010). *Qualitative research: How things work*. New York, NY: Guilford Publication Inc.

Stapa, S. H. (1998). *The process approach to ESL writing.* Selangor, Malaysia: Fakulti Pengajian Bahasa, Universiti Kebangsaan Malaysia.

Stough, L. M. (2001, April). Using stimulated recall in classroom observation and professional development. Paper presented at *the American Educational Research Association,* Seattle, Washington. ERIC Document Retrieval Service No. 4572154.

Sulistyaningsih. (1997). *A descriptive study on rhetoric in students' expository essay* (Unpublished Master's Thesis). University of Malang, Malang, Indonesia.

Suriyanti, S., & Yacoob, A. (2016). Exploring teacher strategies in teaching descriptive writing in Indonesia. *Malaysian Journal of Learning and Instruction, 13*(2), 71–95. Retrieved December 10, 2016, http://repo.uum.edu.my/20599/1/MJLI%20%2013%202%202016%2071%2095.pdf

Swain, M. (2006). Verbal protocols: What does it mean for research to use speaking as a data collection tool? In M. Chalhoub-Deville, C. Chapelle, & P. Duff (Eds.), *Inference and generalizability in applied linguistics: Multiple perspectives* (pp. 97–113). Amsterdam: John Benjamins.

Tucker, J., & Van Bemmel, E. (2002). *IELTS to success: Preparation tips and practice test* (2nd ed.). Australia: John Wiley & Sons.

Whalen, K. (1993). A strategic approach to the development of second language written discourse competency: A comparison of mother tongue and second language written production processes. *Proceedings of the International Conference of Applied Linguistics* (pp. 604–617). University of Granada Press, Spain.

Williams, J. (2005). *Teaching writing in second and foreign language classrooms*. New York: McGraw-Hill.

Williams, J. D. (2003). *Preparing to teach writing: Research, theory, and practice* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.

Williams, J. P. (2008). Nonprobability sampling. In L. M. Given, *The sage encyclopedia of qualitative research methods, 1 & 2*, 562–563. Thousand Oaks, CA: Sage Publication Inc.

Wong, A. T. Y. (2005). Writers' mental representations of the intended audience and of the rhetorical purpose for writing and the strategies that they employed when they composed. *System, 33*, 29–47. Retrieved December 10, 2016, http://dx.doi.org/10.1016/j.system.2004.06.009

Zamel, V. (1982). Writing: The process of discovering meaning. *TESOL Quarterly, 16*(2), 195–209. doi: 10.2307/3586792

Zamel, V. (1983). The composing processes of advanced ESL students: Six case studies. *TESOL Quarterly, 17*(2), 165–187. doi: 10.2307/3586647. Retrieved December 10, 2016, http://www.jstor.org/stable/3586647

APPENDIX A

Six-Trait Writing Rubric

	6 Exemplary	5 Strong	4 Proficient	3 Developing	2 Emerging	1 Beginning
Ideas & Content • Main theme • Supporting details	Exceptionally clear, focussed, engaging with relevant, strong supporting details	Clear, focussed, interesting ideas with appropriate details	Evident main idea with some support that may be general or limited	Main idea may be cloudy because supporting details are too general or even off-topic	Purpose and main idea may be unclear and cluttered by irrelevant details	Lacks central idea; development is minimal or non-existent
Organisation • Structure • Introduction • Conclusion	• Effectively organised in logical and creative manner • Creative and engaging intro and conclusion	• Strong order and structure • Inviting intro and satisfying closure	• Organisation is appropriate, but conventional • Attempt at introduction and conclusion	• Attempts at organisation may be a "list" of events • Beginning and ending not developed	• Lack of structure; disorganised and hard to follow • Missing or weak intro and conclusion	• Lack of coherence; confusing • No identifiable introduction or conclusion
Voice • Personality • Sense of Audience	• Expressive, engaging, sincere • Strong sense of audience • Show emotion: humour, honesty, suspense or life	• Appropriate to audience and purpose • Writer behind the words comes through	• Evident commitment to topic • Inconsistent or dull personality	• Voice may be inappropriate or non-existent • Writing may seem mechanical	• Writing tends to be flat or stiff • Little or no hint of writer behind words	• Writing is lifeless • No hint of the writer
Word Choice • Precision • Effective-ness • Imagery	• Precise, carefully chosen • Strong, fresh, vivid image	• Descriptive, broad range of words • Word choice energises writing	• Language is functional and appropriate • Descriptions may be overdone at times	• Words may be correct but mundane • No attempt at deliberate choice	• Monotonous, often repetitious, sometimes inappropriate	• Limited range of words • Some vocabulary misused
Sentence fluency • Rhythm, flow • Variety	• High degree of techniques • Effective variation in sentence patterns	• Easy flow and rhythm • Good variety in length and structure	• Generally in control • Lack variety in length and structure	• Some awkward constructions • Many similar patterns and beginning	• Often choppy • Monotonous • Frequent run-on sentences	• Difficult to follow or read • Disjointed, confusing, rambling
Convention • Age appropriate, spelling, caps, punctuation, grammar	Exceptionally strong control of standard conventions of writing	Strong control of conventions; errors are few and minor	Control of most writing conventions; occasional errors with high risk	Limited control of conventions; frequent errors do not interfere with understanding	Frequent significant errors may impede readability	Numerous errors distract the reader and make the text difficult to read

APPENDIX B

Profile of the Participants

Name	Erza (Case 1)	Prita (Case 2)	Norma (Case 3)	Suka (Case 4)	Dani (Case 5)	Irza (Case 6)
Age	42 y/o	24 y/o	25 y/o	26 y/o	25 y/o	24 y/o
Undergraduate	English Department, Hasanuddin University	English Department, State University of Makassar	English Department, Hasanuddin University	English Department, State University of Makassar	English Department, Haluoleo Kendari	English Department, Hasanuddin University
Post Garduate	Master in Linguistics, English Language Studies, Hasanuddin University	Master in Linguistics, English Language Studies, Hasanuddin University	Master in Linguistics, English Language Studies, Hasanuddin University	Master in Education, English Language Studies, Hasanuddin University	Master in Education, English Language Studies, Hasanuddin University	Master in Linguistics, English Language Studies, Hasanuddin University
Working Experience	16 years' working experience as an English teacher	5 years' working experience as an English teacher	4 years' working experience as an English teacher	5 years' working experience as an English teacher	4 years' working experience as an English teacher	3 years working experience as an English teacher
Frequency Of Using English Outside The Class	Using English a lot at work and not too often at home	Not using English at all outside the class	Not using English at all outside the class	Not too often, used English to speak with her mother during childhood	Not using English at all outside the class	Not quite often, uses English to discuss topics with sister and father
Proficiency Writing Test Score	34	34	34	34	34	33
Writing Task Score	35	35	34	36	34	35

An Evaluation of Deregulation Policy of The Downstream Petroleum Sector and Nigeria's Economy

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ABSTRACT

The main objective of this paper is to evaluate the impact of deregulation of downstream petroleum sector on Nigeria's economy between 2007 and 2015. It is a qualitative study built on secondary data which were textually analysed. Upon the pivot of public choice theory as a framework for interrogating the themes of the paper, the study posits that the effective deregulation of downstream petroleum sector offers the necessary recipe and vitality for stemming economic rent-seeking attitudes by the elites and political class, and ultimately lead to economic buoyancy. Other recommendations of the paper are capable of addressing the policy gaps/failures identified.

Keywords: Deregulation, downstream, evaluation, Nigeria's economy, petroleum sector, policy

INTRODUCTION

Doing the needful in Nigeria has often been equated with doing the impossible. The poor performance of the Nigerian economy has from time to time driven successive Nigerian governments to take certain policy actions in the area of economic planning. Many of such policies turn out to aggravate the problem intended to be solved. Deregulation of the downstream petroleum sector is widely believed to be one of such policies. The Federal Government of Nigeria, irrespective of the head, party or regime, has over the years been faced with the dilemma of deregulating certain sectors of the economy, particularly the petroleum sector. It is posited by some scholars that the motive behind government intervention in the economy, in form of regulation, is for the benefit of the economy and the citizens (Selznick, 1985 as cited in Badie, Berg-Schlosser, & Morlino, 2011).

Government involvement in the Nigerian economy is ordinarily expected. However, in the petroleum sector, it was a

do or die affair considering the enormous revenue accruable from the sector beginning from the early 1970s when the price of a barrel of oil increased fourfold (Olagunju, 1999). The downstream petroleum sector is particularly important because, it comprises of the refining, distribution and dispensing of petroleum products. The implication is that it determines the price at which petroleum products get to the final consumers; and because petroleum is used in virtually every sector of the economy, the downstream petroleum sector essentially determines the cost of living (Gberevbie & Arowosegbe, 2006).

The Nigerian government immersed itself in the downstream petroleum sector in line with developments in Organisation of Petroleum-Exporting Countries (OPEC) in the early 1970s, as the oil industry was regarded as too politically strategic to be left in the hands of the private sector. Nigeria's downstream petroleum sector was characterized by (Federal) government control and regulated mainly by the state-owned Nigerian National Petroleum Corporation (NNPC) (Federal Republic of Nigeria, 1999). Also, Nigeria's downstream petroleum sector features four refineries and petrochemical plants managed by NNPC. Two of the refineries are located in Port-Harcourt, one in Warri, and one in Kaduna (Adagba, Ugwu, & Eme, 2012). These refineries cannot supply Nigeria's 30-40 million litres daily consumption of refined petrol products, despite recurring investments in turn-around maintenance, leaving Nigeria with no other option but

to import refined petrol products for daily use. The Nigerian government pays the marketers (of the refined petrol products) to subsidize the prices and to ease the economic burden on the people, specifically making the pump price of fuel lower than the price when imported (Soni, 2015).

According to Okonjo-Iweala, Nigeria's two-time former Finance Minister and Head of the Economic Team under the Obasanjo and Jonathan administrations, between 2003 and 2004, subsidies on prices of refined products were approximately 40% of the international price, and the government bore an annual fiscal burden of almost US$1 billion out of a federal budget of roughly US$10 billion to keep petrol pump price low. Nigeria's downstream petroleum sector is also characterised by recurrent scarcity; black market sales (which is due to scarcity, and undermines the government fixed pump price of petrol); as well as oil theft in form of pipe vandalism and bunkering (Okonjo-Iweala, 2012).

Deregulation connotes major changes in Nigeria's downstream petroleum sector. The effect of such measures on Nigeria's downstream petroleum sector translates to a turn-around in the way things are done across the sector; but most importantly, it points to a removal of fuel subsidy, because, to the average Nigerian, deregulation in Nigeria's downstream petroleum sector is tantamount to the removal of fuel subsidy. Considering this, deregulation of Nigeria's downstream petroleum sector has its origin in the 1980s when Nigeria's economy encountered an economic crisis, which was

heightened by the 1987 crash in the global oil market. Under the Babangida military regime (1985–1993), the implementation of the 1986 Structural Adjustment Programme (SAP) introduced the first experiment of deregulation in the Nigerian economy as the pump price of petrol increased (Abogan, Olajide, & Oloba, 2014; Dappa & Daminabo, n.d.).

Currently, Nigeria's economy is in a crisis because over the last twenty-four months, international oil prices have fallen by over 60%. As recently as 2013, oil and gas made up 11% of Nigeria's GDP, 70% of the Nigerian government's income, and 94% of Nigerian export revenues (Isu, Nyako, El-Rufai, & Ahmed, 2002; PricewaterhouseCoopers, 2015). Considering the importance of oil to the Nigerian economy, the decline in global oil prices has had a negative effect on the economy as government revenue has reduced, Nigeria's foreign exchange earnings have dropped, economic growth has slowed, and the purchasing power of the Naira to the Dollar has been volatile (Hegarty, 2016).

Oil companies are retrenching as unemployment is rising, and this has sent shock waves throughout Nigeria's economy. Also, the country's revenue has dropped. According to the 2016 Appropriation Act, expected revenue is 3.86 trillion Naira and expenditure is set as 6.08 trillion Naira. Hence, the country has a 2.2 trillion Naira deficit, Nigeria's highest deficit in recent times. In addition, according to the 2016 Appropriation Act, Nigeria will spend a total of 1.36 trillion Naira servicing debt in 2016. This is also the highest so far (Budget Office of the Federation, 2015). This goes to show that the state of the economy is in steady decline.

In Nigeria, deregulation of the downstream petroleum sector begins with removal of government subsidy on petroleum products. Another major step is the development of a truly competitive market which is, expected to come with removal of subsidy. Whether the government chooses to retain ownership of the four refineries or not, deregulation of the downstream petroleum sector dictates that private actors be allowed in the sector. Policy-wise, deregulation implies a combination of the use of four types of policies, viz: demand management policies, exchange rate and production incentive policies, structural policies and external financing policies (Olashore, 1991).

Proponents of Deregulation argue that the following benefits accrue: eradicating fuel scarcity, encouraging much-needed investment in Nigeria's economy, providing employment opportunities, making the economy more competitive, giving the government more revenue for infrastructural development, increasing the standard of living, and developing the economy (Gendron, 2012). The paper attempts to evaluate the deregulation policy of the downstream petroleum sector in the light of the Nigeria's current economic crisis, considering the relationship between deregulation of the downstream petroleum sector and Nigeria's economy.

METHODS

The data utilised in this study were mainly obtained from secondary sources including journal articles, internet and policy-oriented institutions. A major strength of this paper is its data triangulation from the aforementioned credible sources, and this is pivoted on the submission by White (2000, p. 67) "that if the same method of data collection is from different sources, and over different time…this is often termed data triangulation." The textual analysis of data anchored on Public Choice as theoretical framework for the interrogation of issues, informed the discussion, conclusion and recommendations that followed.

Main Argument

White (2000, p. 66-67) reinforced the practical utility of triangulation in a research of this nature as being "…complementary, with the outcome resulting in a more thorough understanding of the problem under investigation." This method offers an illumination on the trajectory of Deregulation Policy with a focus on the Downstream Petroleum Sector and its impact on Nigeria's economy. Predicated on this, and invigorated by the tenets of public choice theory as utilized in this study, our main argument is that effective deregulation of the downstream petroleum sector offers the necessary recipe and vitality for reducing elite (governing and bureaucratic) rent-seeking behaviours and ultimately galvanise economic growth and development in Nigeria.

LITERATURE REVIEW

The concept of deregulation is explained in this section.

The Concept of Deregulation

To understand deregulation, one must first understand regulation, for as there is no smoke without fire, there is no deregulation without initial regulation (Kalejaiye, Adebayo & Lawal, 2013). According to Badie et al. (2011), regulation refers to any legal instrument, legislative enactment, executive policy, administrative bye-law, constitutional element, economic tool and general means of politico-socio-economic control usually effected by government. It is any government action aimed at shaping individual, group and institutional behaviour. From this understanding of regulation, it might ordinarily be deduced that deregulation is the opposite of regulation. In other words, it is government relinquishing control over individual, group and institutional behaviour. This definition is basic, but a deeper analysis of deregulation as a concept and policy is further necessary. The concept of deregulation, like most concepts in the social sciences, does not have a single, universal definition. This is because, beyond diverse definitions by different scholars, deregulation translates to policies adopted by governments in various parts of the world and the contexts and forms of deregulation employed in policy vary between and within countries.

Deregulation has been defined from different viewpoints. According to Barberis

and May (1993), deregulation is the attempt to eliminate red tape (unnecessary time-consuming procedure) for businesses. To Barnhart (1996), deregulation is basically an economic tool meant to remove restrictions such as price or rate controls from the production, distribution and sales of commodities. In other words, deregulation as a policy option (when faithfully implemented) clears barriers to the smooth running of the economy and galvanizes economic performance.

Cleveland and Morris (2009) saw deregulation as a policy process in which a government agency opened up full-scale competition for the supply of the desired energy resource, often down to household consumption level. This is in order to ensure a competitive economic system that facilitates a price mechanism by the market forces of demand and supply, and at the same time prevent monopolistic tendencies that stifle economic efficiency and growth. Adegbemile (cited in Kudus, 2011) captures deregulation as an attempt to enhance the competitiveness of economic actors via an economic reform comprising one or more fiscal policies that weaken, loosen or completely restrict participation in a market particularly in the aspect of price control (Kudus, 2011). This position was reinforced in the Nigerian situation by Monday, Ekperiware and Muritala (2016) wherein the subsidy regime typified price control, and the serious financial burden of this unsustainable arrangement can only be mitigated by a total deregulation of the downstream petroleum sector.

As a policy option, deregulation ranges from a shift in strict control to a free-market or laissez-faire economic system (where there is minimal government participation in an economy) to the government giving up some aspects, such as competing in the economy, to focus on other aspects, like legislating for the economy. Therefore, it is pertinent to note that deregulation hardly ever translates to the absence of regulation, rather it is the removal or restructuring of certain regulations which are seen as problematic as underscored by the above averments by Monday et al. (2016) in the Nigerian scenario. Usually, the government is still involved, just in different ways, such as provision of legal framework and enabling environment (Gbosi, 2004; Nwachukwu, 2015).

A major concern with conceptualising deregulation lies in the fact that deregulation is lumped, and often confused, with the following concepts: privatisation, commercialisation, and liberalisation. While deregulation amounts to restructuring of government regulation to effect either privatisation, Commercialisation, or liberalisation singly or concurrently, privatisation is described by Jerome (cited in Kalejaiye et al., 2013) as a policy aimed at changing the mix in ownership and management of enterprises away from government to private control.

The purpose of privatisation is explicitly economic growth and development with the assumption that private hands are better in business or have more funds to invest when compared to government (Izibili & Aiya,

2007). Commercialisation connotes the reorientation of public agencies involved in the economy to become profit-driven, thereby beginning to source for funds outside government and adopting methods used by private companies (Kalejaiye et al., 2013). While liberalisation according to Hermann and Verhoest (2012), is the removal of public sector monopolies and the creation of public service markets with at least two actors in a bid to introduce competition and prevent market dominance by a single provider.

In other words, privatisation means transferring ownership and control of a government agency to private hands; Commercialisation means making a government agency profitable; and liberalisation means getting rid of a monopolistic government agency to open a market up to competition. Deregulation is both separate from and aligned with these three concepts because all these are disabled by regulations and enabled by deregulation, which is why deregulation is a combination of commercialisation, privatisation, and liberalisation but not synonymous with one of them individually (Olashore, 1991).

A prominent step towards understanding deregulation is understanding the reason for deregulation. According to Olashore (1991), the chief goal of deregulation is ordinarily to eliminate or reduce distortions (like price control, taxes, subsidies, imperfect competition, exchange rate rigidities and trade restrictions) which may be harmful to an economy. One of these distortions, price control or subsidy for consumer goods, though welfare-oriented, usually eventually necessitate deregulation, because price controls in points of rising costs squeeze profits and discourage investment as noticeable in the Nigerian dismal experience (Gberevbie, Ibietan, Abasilim, & Excellence-Oluye, 2015). The economist, Adam Smith, recognised as the earliest proponent of deregulation, advocated for a laissez-faire economic system where the government took its hands off the economy because he believed that way, economies would perform better. In the 18th century, Smith's solution to government economic interference and subsequent economic malfunctioning was simply for the government to scale back. In the 21st century, deregulation entails the use of four types of policies: demand management policies; exchange rate and production incentive policies; structural policies; and external financing policies (Olashore, 1991).

To Badie et al. (2011), deregulation has been employed by many developing countries (like Nigeria) for the purpose of attracting foreign direct investment, but this is yet to fully materalise in the country. Deregulation injects competition into an economy, thereby leading to the development of businesses and reducing the unemployment rate (Gendron, 2012). To recap, the underlying idea behind deregulation is the removal, reversal or reduction of some form of government regulation for the purpose of solving a perceived or actual problem which is usually economic. This position was not only underscored by Maduka, Ihonre and

Anochiwa (2015), they corroborated with reference to Nigeria that "various (central) Governments have come up with varying promises to turnaround the situation, yet they end up just increasing the price of petroleum products without considering the impact…on the consumers and the economy." It is pertinent to note that to the average Nigerian, deregulation of the downstream sector is synonymous with petroleum products price increase, and the details of these are presented in Table 1.

The above situation typifies the Nigerian paradox as one of the largest producer of crude oil among the Organisation of Petroleum Exporting Countries (OPEC), and with large deposits of petroleum products, yet imports and pays international prices for the resources that it has in abundance (Monday et al., 2016). There is a convergence of opinions (Adelabu, 2012; Ayodele, Obafemi, & Ekong, 2013; Owoeye & Adetoye, 2016) on this anti-thetical state of affairs within the Nigerian petroleum sector, and this explains the "inefficiencies in the downstream…sector as reflected in breakdown and low capacity utilisation experienced by the nation's four refineries" (Ayodele et al., 2013, p. 1). Owoeye and Adetoye (2016) corroborated with allusions to the complicity, overbearing and omnibus roles of the Nigerian National Petroleum Corporation (NNPC) – the central government's bureaucracy that superintended and dominated activities in the upstream and downstream petroleum sectors.

The culmination (of the above) is the multiplicity of bureaus with overarching functions and responsibilities, such as the management of the dramatised subsidy regime, which arose from the failure or refusal of successive central governments to "fully pass increases in international petroleum product prices to domestic consumers" (Ayodele et. al, 2013, p. 5) has resulted in massive fraud and kleptomania (Ijewemere, 2015, p. 4). Deregulation of the downstream petroleum sector (which commenced its partial journey in 2003 during President Obasanjo's administration) is thus conceived as policy/reform option to attenuate these ills and sundry dysfunctions. However, Nigerians are apprehensive that "rather than use the fund realised from the deregulation exercise to better the lot of the populace, the fund will find its way into private purses" (Adelabu, 2012, p. 197). This underscores the argument made (earlier) on elite complicity in corruption and resource plunder. The application of appropriate administrative and institutional reform imperatives anchored on the tenets of public choice theory holds the promise of redressing these malaise (Ibietan & Joshua, 2015).

Stanley (2016) illuminated our understanding on this discourse with the anatomy of Nigeria's downstream sector as follows: lack of clarity in the deregulation process; operators under threat of losing their investments; centralised product supply system driven by NNPC; marketers depots were grossly underutilised, proliferations of depots; forex challenges to import

products; pipeline vandalism; fuel tankers destroying roads; perennial fuel shortage cross the country; confusion on regulation between the Department of Petroleum Resources (DPR) and Petroleum Products Pricing Regulatory Agency (PPPRA); and ancillary bottlenecks. These call for holistic review and intricate examination of policies, practices and processes, backed by strong political will and reform initiatives located in the Public Choice theory.

RESULTS AND DISCUSSION

Theoretical Framework: Public Choice Theory

The theoretical framework considered appropriate for this research is the Public Choice theory. The degree of its suitability makes it quite tempting to posit that the theory was designed specifically to explain the impact of deregulation of the downstream petroleum sector on Nigeria's economy. Public choice theory was developed to explain government decision-making in the face of government failure. Also called, 'the economic theory of politics, the theory was designed to analyse issues that are both political and economic (Buchanan, 1999, p. 45). The theory is more political than economic because, it does not seek to explain how the economy works, but uses the economic methods and tools to explore political phenomena (Butler, 2012). The theory emphasises the fact that economic self-interest, also referred to as utility-maximization, is the driving force of politics and governments will not always make the best decisions for a country's economy

(Mariotti, 2015). Also, in policy analysis, public choice theory stresses that because political actors are utility maximizers, a policy cannot be adequately evaluated in isolation of the incentives for politicians and the people (voters) to adopt it (Hill, 1999; Matthews, 2013). The political dimension to the narrative on the deregulation of the downstream sector in Nigeria reflects in unsettled debates and public discourse by disparate segments of the society as documented in Adelabu (2012, 194) and Temitayo (2014, 100).

The foundations and applications of public choice theory are varied and feature prominent scholars including Duncan Black (the median-voter theorem), Gordon Tullock (logrolling), Anthony Downs (representative democracy), Ronald Coase (social costs), and Mancur Olson (interest-group activity). The above scholars were influenced by Kenneth Arrow, winner of the 1972 Nobel Prize in Economics, and James Buchanan, winner of the 1986 Nobel Prize in Economics, who was inspired by Knut Wicksell's ideas on protecting minorities during decision-making (Blankart & Koester, 2006). The later part of this averment does not typify Nigerian situation, "as policies designed to address the deficiencies and defects in the structure end up being poorly articulated and/or implemented because of…political or rent-seeking selfish interests" (Adedipe as cited in Adelabu, 2012, p. 197).

Arrow is a forerunner to Buchanan and Tullock (1962). Arrow formulated the "impossibility theorem" to prove that it is impossible for the democratic decision-

making to allocate resources optimally (Shaw, n.d). Buchanan and Tullock are regarded as the initiators of public choice theory. The theory is traced to their 1962 book The Calculus of Consent which expressly explains how collective decision-making is overrated and unfair because the majority has its way and this puts a burden on a minority that did not support such a decision. Therefore, not only does the theory posit that governments tend not to make the best decisions for a country's economy, it also argues that governments are bound to make the best decisions that are unfair to some. Furthermore, bureaucracies are instrumental in diverting government efforts and resources to achieve interests that are hardly ever public-oriented (Butler, 2012). Ibietan and Joshua (2015, p. 61) argues that:

> *"...the relevance of this theory to governance and the management of public affairs in Nigeria cannot be overemphasised. The poor state of infrastructures, social services and delivery of essential public goods in the face of abundant human and material resources shows a yawning gap between resource endowment and management on one hand, and development outcomes on the other."*

According to Buchanan (1999, p. 57), "politics is a game, a set of arrangements, in which many players with different goals interact for the purpose of producing results that may neither be efficient nor internally consistent" Buchanan (1999) insisted that his description exposed politics without romance politics, in other words, politics as it is, not as it should be. It is therefore not surprising that Adelabu (2012, p. 194) argued with reference to Nigeria thus "those who have presided over the state have tend to personalise power and…collective national resources, while being excessively reckless in managing the affairs of the nation."

Todaro and Smith (2011, p. 128-782), in portraying the economic utility of public choice theory, stated that the public choice theory is "the theory that self-interest guides all individual behaviour and that governments are inefficient and corrupt because people use government to pursue their own agendas…(which leads to) misallocation of resources." Out of self-interest, individuals seek political influence to get special benefits (called "rents") from government policies that constrain access to essential resources and commodities, politicians use public resources to ensure they win elections, and public officials use their positions to get payoffs from rent-seeking citizens as well as to operate their sheltered businesses. These add up to government mismanagement of an economy. Since government decision-making is flawed, public choice theorists argue for deregulation to tackle regulation which was developed by George Stigler (1971) and Sam Peltzman (1976). Ijewereme (2015) presented copious emblems of economic rent-seeking behaviours manifesting in avaricious and rapacious tendencies among the Nigerian governing and bureaucratic elites, which circumscribed development.

In a related discourse, Ibietan (2013), building on earlier scholars stated that the central idea of public choice theory is that the ideal means of forming policies and delivering services were offered by market principles in the private sector, because the government (public sector) tended to be over bloated, over-politicized, detached from the citizens, and distracted by vested interests. Therefore, government officials either have little or no idea of citizens' desires and demands or know and simply ignore them, then oversupply insufficient and inefficient services. Ibietan and Joshua (2015) reinforced the notion that self-interest drove government actions and decisions. They argue that government officials, including politicians and public bureaucrats (often supported by organised interest groups), out of self-interest, conceal economic realities from the citizens and then try to fulfil political campaign promises via deficit funding which eventually has a negative effect on the country's economy. Hence, the argument for deregulation in the efficient provision of public oriented services in Nigeria predicated on the reversal of "inadequacies and deficiencies of the policy measures" (Ibietan & Itodo, 2015, p. 3).

Nigeria's Petroleum Sector

Petroleum is a collective term for crude oil, natural gas, natural gas liquids, and other related products naturally found underground as a result of fossilisation. Petroleum is extracted via drilling. Before petroleum is extracted it has to be discovered.

After petroleum is discovered and extracted, it is separated into potential products including petrol, kerosene, lubricating oil, aviation fuel, asphalt, petroleum jelly, diesel, and paraffin wax among others via the processes of fractional distillation and cracking (Harrison & Waites, 1998).

Petroleum literally largely powers civilization as it is the most used source of fuel in industrialized and industrialising countries around the world. Almost 90% of the world's petroleum is used as fuel, while the remainder is used in the manufacture of products like plastics, paints, insecticides, synthetic fibres, drugs, detergents, and fertilizers (Cleveland and Morris, 2009). Due to the global utility and demand for petroleum, the international petroleum industry has existed since the 19th century.

Nigeria's petroleum industry began operations in the 1950s. Petroleum, in commercial quantity, was discovered in Oloibiri, Nigeria in 1956, and by 1958 production had commenced. Currently, Nigeria has an estimated crude oil reserve of over 22 billion barrels and an estimated production rate of 2 million barrels a day (Buhari, 2015).

Upstream Petroleum Sector. Nigeria's upstream petroleum sector involves the exploration and extraction of petroleum. It is engaged in, by various foreign and domestic companies, but its most important actor is the NNPC which is both a competitor and a regulator. The Nigeria National Petroleum Corporation (NNPC) works with private actors in Nigeria's upstream sector using

the following arrangements: concession agreement; joint venture; production sharing contracts; and risk service contracts. From a (KPMG, 2014) report, it is noted that the Nigerian upstream oil sector is the single most important sector in the economy. It accounts for over 90% of the country's exports; about 80% of Nigeria's revenue. Oil is currently produced from the Anambra onshore basin; Benin/Dahomey deepwater basins; and the Niger Delta deep offshore basins. The bulk of oil reserves and a huge portion of current production are from the Benin and Niger Delta basins (KPMG, 2014).

Midstream Petroleum Sector. In Nigeria, the midstream petroleum sector encompasses the movement of extracted petroleum from oil wells in Nigeria to refineries within and outside Nigeria. The sector also covers the import of refined petroleum products to Nigeria for domestic consumption. This necessitates transportation (by pipeline, rail, barge, oil tanker or truck), storage, and wholesale distribution of crude or refined petroleum products. Pipelines and other means are used to move crude oil from production sites (oil wells and drilling rigs) to refineries, as well as to deliver the various refined products to downstream distributors. This also includes natural gas. Largely because crude oil is transported outside Nigeria and refined petroleum products are then imported, the midstream petroleum sector is almost non-existent in Nigeria (Arong & Egbere, 2013).

Downstream Petroleum Sector. The downstream petroleum sector refers to the last stage of processing and actual use of petroleum products (Cleveland & Morris, 2009). Nigeria's downstream petroleum sector, encompasses refineries, depots, and petrol stations that make consumer access to refined petroleum products possible. Nigeria's downstream petroleum sector is currently characterized by federal government control, and regulated mainly by the state-owned Nigerian National Petroleum Corporation (NNPC) (Federal Republic of Nigeria, 1999).

Nigeria's downstream petroleum sector comprises four refineries and petrochemical plants managed by the NNPC. Two located in Port-Harcourt, one in Warri, and one in Kaduna (Adagba, Ugwu, & Eme, 2012). These refineries are ineffective, despite recurring investments in turn-around maintenance, and they cannot supply Nigeria's 30-40 million litres daily consumption of refined petrol products leaving Nigeria with no other option but to import refined petrol products for daily use (Soni, 2015). Then, the Nigerian government pays the marketers of the refined petrol products to subsidize the prices of these imported refined products and ease the economic burden on the people, specifically making the pump price of fuel lower than the price when imported. To this effect, the Petroleum Products Pricing Regulatory Authority (PPPRA), an NNPC subsidiary, was created in 2003 to fix prices of petroleum products sold in the country. Today, the PPPRA fixes only the price of

petrol (Premium Motor Spirit) because the prices of kerosene (Dual Purpose Kerosene), Diesel (Automotive Gas Oil) and Aviation Fuel have been left to the market for price determination (Arong & Egbere, 2013). According to Okonjo-Iweala, Nigeria's two-time former Finance Minister and Head of the Economic Team under the Obasanjo and Jonathan administrations, between 2003 and 2004, subsidies on prices of refined products were approximately 40% of the international price, and the government bore an annual fiscal burden of almost US$1 billion out of a federal budget of roughly US$10 billion to keep pump price of petrol low. Nigeria's downstream petroleum sector was also characterized by recurrent scarcity; black market sales, which is due to scarcity and serves to undermine the government fixed pump price of petrol; smuggling of refined products to neighbouring countries; and oil theft as a result of pipe vandalism and bunkering. (Okonjo-Iweala, 2012).

Deregulation Policy of Downstream Sector

The idea of deregulation when applied to Nigeria's downstream petroleum sector connotes the reduction and restructuring of the regulations that guide the downstream petroleum sector. The deregulation of Nigeria's downstream petroleum sector is a Federal Government policy which has been undertaken by several military regimes and civilian administrations over the last thirty years. Underscoring the deregulation policy in the downstream petroleum sector,

Agbebaku et al. (2005) (cited in Gberevbie et al., 2015, p. 138) posit as follows:

> *"...that the Nigerian government recognises the inadequacies of the existing state-owned oil companies and desires to maximise supply sources for the refined products market in the country; that local and private investors would be willing to take over the state-owned facilities in their current state of dilapidation and operate them efficiently and profitably thereafter; that government monopoly of refining and distribution from the state-owned storage depot would be completely unbundled and abolished; that private refineries would procure crude oil at competitive rates and sell their refined products profitably and at international prices both in and outside Nigeria as desired by the operator; that private investors would have open access to state-owned facilities like petroleum reception jetties at Escravos, Atlas Cove, Okrika, Effurun and Calabar, including the storage tanks at Port-Harcourt, Warri and Kaduna for expediting the logistics of improving petroleum products availability in Nigeria; that prospective private operators must have the necessary financial and technical capacities and be liable to applicable environmental, community relations obligations, safety, quality and other standards, and that unnecessary impediment, including over-bearing procedures for granting*

licences to prospective private refiners and other potential investors in the downstream sector that need to be removed may remain, given the nature of the bureaucracy in Nigeria."

In line with the above, the Federal Government of Nigeria established the PPPRA to ensure the proper implementation of the policy and saddled them with the following responsibilities:

"...establish an information and data bank through liaising with all relevant agencies; facilitate informed decisions on pricing policies; moderate volatility in petroleum products pricing, while ensuring reasonable returns to operators; oversee the implementation of relevant recommendations and programmes of the Federal Government; establish parameters and codes of conduct for all operators; maintain constant surveillance over all petroleum products; identify macroeconomic factors in relation to pricing of petroleum products and advise the government on appropriate strategies for dealing with them; establish linkages with key segments of the Nigerian society and ensuring that their expectation enjoy the widest possible understanding and support; prevent conspiracy and restrictive trade practices that are harmful to the sector; and play a mediating role for all stakeholders in

the sector." (Agbebaku et al., 2005 as cited in Gberevbie et al., 2015, p. 138).

Additionally, it is noteworthy that every Nigerian government in the past three decades has been on the path of deregulating the country's downstream petroleum sector. Though various governments have differed in their approach to deregulating the country's downstream petroleum sector, however what they all have in common is changing the official prices of petroleum products in the country, particularly petrol (PMS), as shown in Table 1 because it is the most consumed petroleum product in the country (Emejuiwe, 2014).

Therefore, it can be persuasively argued that deregulation of Nigeria's downstream petroleum sector is tantamount to changing the pump price of petrol (Ogwo & Onuoha, 2013).

On a broader scale, deregulation of Nigeria's downstream petroleum sector comprises reconstituting the various government agencies involved in the downstream petroleum sector as well as restructuring the variety of laws and policies that shape the downstream petroleum sector. Okonjo-Iweala (2012), avered that the binding idea behind changing the pump price of petrol, reconstituting the various government agencies involved in the downstream petroleum sector, and restructuring the regulations amount to reforming the sector with the aim of reducing government involvement in the sector.

Table 1
Petrol Price increases in Nigeria (1978-2012)

S/No	Date	Administration	Price Per Litre	Percentage Change (%)
1.	1978	Obasanjo	15 Kobo	-
2.	1990	Babangida	60 Kobo	300
3.	1992	Babangida	70 Kobo	17
4.	1992	Babangida	NGN3.25	364
5.	1993	Shonekan	NGN5.00	54
6.	1994	Abacha	NGN11.00	120
7.	1994/98	Obasanjo	NGN11.00	-
8.	2000	Obasanjo	NGN20.00	82
9.	2000	Obasanjo	NGN22.00	10
10.	2001	Obasanjo	NGN26.00	18
11.	2003	Obasanjo	NGN40.00	54
12.	2004	Obasanjo	NGN45.00	13
13.	2007	Obasanjo	NGN70.00	56
14.	2007	Yar-Adua	NGN65.00	0.07
15.	2012	Jonathan	NGN141.00	117

Source: South-South Elder's Forum cited in Soyinka (2012, p. 47)
Note: The only major change after the last revision in 2012 as shown in Table 1 was under this present (Buhari) Administration which increased the price of Petrol Motor Spirit from N141 to N145 per litre in 2016

Analysis of the Deregulation Policy and Nigeria's Economy

A country's economy refers to its wealth and resources in terms of production and consumption of commodities, which is measured by its Gross Domestic Product (GDP). GDP refers to the value of goods and services produced in an economy within a year (Umo, 2007). The state of a country's economy embodies its consumption, investment, savings, government expenditure, and net exports (exports minus imports) as primary indicators. Secondary indicators include foreign exchange, inflation and unemployment rates.

Though Nigeria has a developing lower/middle-income economy, it had the largest nominal economy in Africa with a 2014 GDP of $568.5 billion. In spite of this, over half the estimated 170 million people live on less than a dollar per day. Since 2004, the Nigerian economy has expanded at an average rate of 7% a year—faster than the West African average (The Economist, 2014; World Bank, 2014).

The most striking feature of Nigeria's economy is its over-dependence on petroleum. Nigeria is afflicted with Dutch Disease, which according to Brahmbhatt et al. (2010) is a phenomenon reflecting changes in the structure of production in the wake of a favourable shock, occasioned by large natural resource discovery and a rise in the international price of an exportable commodity which leads to reduction in the contribution of other sectors of the economy due to neglect.

In Nigeria, the overdependence on petroleum translated to neglect of other sectors of the economy. The dependence on petroleum is so much that budgets are drawn up with revenue from petroleum in consideration. Therefore, according to Ayida (1987), petroleum is the root of all evils in Nigeria, and oil is the heart through which the country breathes (Ikejiani-Clark, 2007). The country is unduly reliant on oil for its foreign exchange earnings and is at the mercy of global oil prices (Nnebe, 2009). In 2013, the petroleum industry accounted for 11% of Nigeria's GDP, 70% of the Nigerian government's income, and 94% of Nigerian export revenues (Isu et al., 2002; PricewaterhouseCoopers, 2015).

To illustrate how much the Nigerian government has come to rely on petroleum for revenue over the years: in 1960, the percentage of Nigerian government revenue derived from petroleum was 2.7%, by 1970 it was 57.6, by 1975 the figure stood at 92.6%, in 1995 it was 70.5%, and in 2013 it was 70% (Ehinomen & Adeleke, 2012). These statistics underline the profligacy and serious unaccountability of successive Nigerian central governments and validates the resource curse theory.

Another significant fact is that Nigeria's economy is heavily import-driven. Nigerian consumers, producers and investors are chronically dependent on imports. The implication of this is dual: firstly, billions of dollars leave the country annually; and secondly, the economy has not developed a strong manufacturing sector. This situation combined with the over-dependence on petroleum spell calamity for Nigeria's economy (Nigerian Institute of Social and Economic Research, 2010).

Nigeria's economy is currently in crisis. The revenue accruable from petroleum has dropped significantly over the last two years. Between 2015 and 2016, the projected government revenue from petroleum dropped by 50% from N1.64 trillion to N820 billion because the price of petroleum fell from about $100 dollars a barrel to around $33 (Buhari, 2015). The reason for this is that in 2014, Nigeria lost the largest buyer of its petroleum, the United States, because the United States secured domestic source of petroleum from shale oil (the United States production of petroleum has nearly doubled since 2010). On a wider scale, the effect of the United States petroleum independence had an international magnitude and led to other countries increasing their supply of oil. Most notably, Saudi Arabia increased its oil production to a record 10.3 million barrels per day. Due to the abundance of supply and less demand, the result is that the price of petroleum in the international market has plunged, so has Nigeria's main source of national income (Plumer, 2016; The Economist, 2014, 2015). The economic implications of the drop in Nigeria's oil revenue is that the purchasing power of the Naira to the Dollar has been volatile for the cost of imported goods. Also, there is less money in the economy for investment (Hegarty, 2016). Hence, Nigeria's economy is currently facing a crisis and addressing its petroleum industry is tantamount to taking steps to solving the problem.

It is evident from the foregoing that there is a significant relationship between the downstream petroleum sector and the economy. It is also clear that Nigeria's downstream petroleum sector and Nigeria's economy are linked in various ways. According to Adelabu (cited in Majekodunmi, 2013, p. 76), "To say that the economy is heavily dependent on the oil industry will amount to an understatement as the oil industry is nothing short of a life-blood for the Nigerian economy." In 2013, petroleum was Nigeria's most exported commodity, providing 11% of Nigeria's GDP, 70% of the Nigerian government's income, and 94% of Nigerian export revenues (PricewaterhouseCoopers, 2015). This was still the case in 2015. The importance of petroleum to Nigeria's economy is so much that budgets are planned around the international price of petroleum and how much is expected to be sold; for instance, Nigeria's 2015 budget was based on a benchmark oil price of $53 per barrel and oil production of 2.28 million barrels per day, while the 2016 Budget was projected on a petroleum price of $38 per barrel and a production estimate of 2.2 million barrels per day (Buhari, 2015).

Furthermore, petroleum is essential to businesses in Nigeria's economy. Emejuiwe (2014) states that diesel is the source of energy for large firms and petrol is the energy source of the small firms and households across the country. Petrol, the most consumed of the products, has a consumption rate of 31-40 million litres daily due to the fact that businesses are left to power themselves because of the dismal state of Nigeria's public electricity supply (House of Representatives, 2012). In addition, transportation of commodities by automobiles which run on petrol adds to their cost (Onyemaechi, 2012). Moreover, the economic productivity of millions of working-class Nigerians is influenced by their ability to power their houses with diesel and petrol on a daily basis, as well as their transportation for work purposes. Therefore, underscoring the relationship between Nigeria's downstream petroleum sector and Nigeria's economy.

Predicated on the link between Nigeria's downstream petroleum sector and Nigeria's economy, the nexus between deregulation of Nigeria's downstream petroleum sector and Nigeria's economy cannot be overemphasised. Sabiu and Reza, (2014) proved that changes in the price of petrol due to deregulation result in changes in GDP and unemployment in the country. Changes in the price of petrol have a strong impact on the prices of commodities and cost of electricity which in turn affect the cost of living as well as cost of doing business, and these constitute the GDP (the value of goods and services) produced and consumed in Nigeria (Sabiu & Reza, 2014).

CONCLUSION

Nigeria's economy is arguably subject to the vagaries of the OPEC oligopolistic market and global economic swings. This explains the current economic situation which lies in

"intensive care unit", gasping desperately for "oxygen", and there is no consensus yet among the "Minders" of the economy on the appropriate solution to restore stability.

An objective analysis of the potential and capacity of the Nigerian economy continues to validate Ibeanu's (2008) thesis on the concomitant juxtaposition of affluence with affliction in Nigeria. Unless and until the elites and political class wake to the realization of using affluence (oil wealth) to neutralise rising affliction (poverty) of the populace, Nigeria matches precariously towards political rebellion. The Economist (2014) and World Bank (2014) revealing poverty statistics in the Country gives vent to this conclusion. The situation appears quite worse now, as the Nigerian Currency (Naira) has tumbled against the US Dollar at over 200%, with the Dollar exchanging for N480.00 as at first week of October 2016. These submissions are further strengthened by the theoretical framework of the study as follows: Public choice theory as a pivot for this study is anchored on the peculiarities and specificities that characterise successive central government policies (formation and implementation) in Nigeria, and zero-in on the impact of deregulation of the downstream petroleum sector on Nigeria's economy between 2007 and 2015.

The theory presents a profile and graphic illustration of the Nigerian bureaucratic and political elite, and demonstrates or reveals how government policies led to negative economic consequences as typified by the observable flaws in the deregulation policy of the downstream petroleum sector. This is reinforced by the situation in which the hitherto subsidy regime benefitted only the rent-seeking elite class to the detriment of the greater majority of the populace.

Thus, notwithstanding Farazmand's (2012) criticism of the public choice theorists armed with the gospel that "eliminates public spheres' irrelevance of the state" and the "end of public administration" (Farazmand, 2012, p. 490, 492), this study avers that the effective deregulation of the downstream petroleum sector built on the tenets of public choice theory offers the necessary recipe and vitality for stemming economic rent-seeking attitudes of Nigerian governing/bureaucratic elites and the political class.

Based on the foregoing, the paper recommends the following: There is an urgent and compelling need to reconstitute the various government agencies involved in the downstream petroleum sector, and a restructuring of the various laws and policies shaping the sector. Additionally, in order to stem the tide of profligacy, unaccountability and corruption, Nigeria must commit to building and sustaining strong bureaucratic and governance institutions anchored on effective controls, transparency and probity in public governance process. It is further suggested that the Nigerian paradox and long-standing amorous but dangerous romance with the "Dutch Disease" call for not only urgent scrutiny but proactive steps to robustly and productively diversify its

economy, and exit the current precarious economic situation. As a corollary to the above, it must be reiterated that oil is a depleting asset, and when indeed, Nigeria escapes from its present economic condition, adequate care must be taken and deliberate strategy evolved to invest wisely, the proceeds and returns on petroleum oil wealth, thus keeping the country in a constant state of liquidity and economic buoyancy.

REFERENCES

Abogan, O. P., Olajide, W., & Oloba, O. (2014). The Impact of Deregulation of the Economy on Nigerian Commercial Banks; A Case Study of Some Selected Commercial Banks in Ilesa, Osun State. *Australian Journal of Business and Management Research*, *3*(10), 19-27.

Adagba O., Ugwu, S. C., & Eme, O. I. (2012). Deregulation and Anti-Subsidy Removal Strikes in Nigeria, 2000-2012. *Arabian Journal of Business and Management Review, (OMAN Chapter)*, *1*(7), 69-83.

Adelabu, N. S. (2012). The Political Economy of Oil Deregulation in Nigeria's Fourth Republic: Prospects and Challenges. *Journal of Emerging Trends in Educational Research and Policy Studies*, *3*(3), 193-198.

Adagunodo, M. (2013). Petroleum Products Pricing Reform in Nigeria: Welfare Analysis from Household Budget Survey. *International Journal of Energy Economics and Policy*, *3*(4), 459-472.

Agbebaku, P. E., Edeko, S. E. & Aghemelo, A. T. (2005). The Effect of Deregulation in the Downstream Sector of the Oil Industry on Corruption in Nigeria. In A. S. Akpotor, M. E. Omohan, B. O. Iganiga, O. M. Aigbokhaevbolo & A. O. Afolabi (Eds). *Deregulation and Globalization in Nigeria: Issues and Perspectives*. Ekpoma: Ambrose Alii University. 112-126.

Arong, F. E. & Egbere, M. I. (2013). The Perception of Nigerians on the Deregulation and Privatisation Moves of the Government in the Oil and Gas Industry in Nigeria. *International Journal of Public Administration and Management Research*, *2*(1), 119-129.

Ayida, A. A. (1987). *Reflections on Nigerian Development*. Lagos: Malthouse Press Limited.

Ayodele, O. S., Obafemi, F. N. & Ebong, F. S. (2013). Deregulating the Downstream Sector of the Nigerian Petroleum Industry. *British Journal of Economics, Finance and Management Sciences, 8*(2), 1-22.

Badie B., Berg-Schlosser, D., & Morlino, L. (2011). *International Encyclopedia of Political Science*. Thousand Oaks, California, United States: SAGE Publications Inc.

Barnhart, R. K. (Ed.). (1996). *The World Book Dictionary*. Chicago, United States: The World Book Inc.

Ehinomen, C. & Adeleke, A. (2012). An assessment of the distribution of Petroleum products in Nigeria. *E3 Journal of Business Management and Economics*, *3*(6). 232-241.

Emejuiwe, V. (2014). What alternative to fuel subsidy? Retrieved August 3, 2017 from http://sunnewsonline.com/new/what-alternative-to-fuel-subsidy/

Brahmbhatt, M., Canuto, O., and Vostroknutova, E. (2010). Dealing with Dutch Disease. *The Economic Premise (16).* The World Bank.

Buchanan, J. M. (1999). *The Collected Works of James M. Buchanan: Vol. 1 (The Logical Foundations of Constitutional Liberty)*. Indiana, U.S.A.: Liberty Fund, Inc.

Buhari, M. (2015). The Budget of Change" 2016 Budget Speech to A Joint Session of the National Assembly.

Butler, E. (2012). *Public Choice – A Primer*. London, United Kingdom: The Institute of Economic Affairs.

Cleveland, C. J., & Morris, C. (2009). *Dictionary of Energy*. Oxford, United Kingdom: Elsevier Ltd.

Farazmand, A. (2012). The Future of Public Administration: Challenges and Opportunities- A Critical Perspective. *Administration and Society, 44*(4), 487-517.

Gberevbie D. E. l., & Arowosegbe, J. O. (2006). The Down-Stream Petroleum Sector and National Development: An Analysis of the Deregulation Policy as a Strategy. *Petroleum Training Journal*, *3*(1), 10-23.

Gberevbie, D. E., Ibietan, J., Abasilim, U. D., & Excellence-Oluye, N. (2015). Deregulation Policy and Development in Nigeria: The Petroleum Sector Experience, 1999-2014. *Journal of Social Development in Africa*, *30*(2), 129-152.

Gbosi, A. N. (2004). *Monetary Economics and the Nigerian Financial System*. Ibadan: Olorunshola Publishers.

Gendron, C. (2012). *Regulation Theory and Sustainable Development: Business leaders and ecological modernization*. London, United Kingdom: Routledge.

Harrison, P. & Waites, G. (1998). *The Cassell Dictionary of Chemistry*. London, United Kingdom: Wellington House.

Hegarty S. (2016). 'We are not criminals' Nigerians tell their president. Retrieved August 3, 2017 from http://www.bbc.com/news/blogs-trending-35526652 (October 7, 2016)

Hermann, C. & Verhoest, K. (2012). The Process of Liberalisation, Privatisation and Marketisation. In C. Hermann, & J. Flecker (Eds.), *Privatisation of Public Services: Impacts for Employment, Working Conditions, and Service Quality in Europe* (pp 6-32). New York, United States: Routledge.

Hill, P. J. (1999). Public Choice: A Review. *Faith & Economics, 34,* 1–10.

House of Representatives (2012). *Report of the Ad-Hoc Committee to Verify and Determine the Actual Subsidy Requirements and Monitor the Implementation of the Subsidy Regime in Nigeria. Resolution No. (HR.1/2012)*. Abuja, Nigeria: Author.

Ibeanu, O. (2008). Affluence and Affliction: The Niger Delta as a Critique of Political Science in Nigeria. An Inaugural Lecture of the University of Nigeria, Nsukka.

Ibietan, J. (2013). New Public Management and Public Service Effectiveness in Nigeria: A Pragmatic Discourse. *Public Policy and Administration Research*, *3*(7), 53-61.

Ibietan, J. & Itodo, S. M. (2015). Nigeria and State-Building Initiatives: A Critical Assessment. *International Journal of Interdisciplinary and Multidisciplinary Studies, 2*(5), 1-7.

Ibietan, J., & Joshua S. (2015). New Public Management and Developmental State: Revisiting the Institutional Imperatives in Nigeria. *Mediterranean Journal of Social Sciences*, *6*(3), 58-66.

Ijewereme, O. B. (2015). Anatomy of Corruption in the Nigerian Public Sector: Theoretical Perspectives and Some Empirical Explanations. *Sage Open*, *5*(2), 1-16.

Ikejiani-Clark, M. (2007) Nigeria: Oil, Internal Threats and Vulnerability. *Journal of International Politics and Developments Studies, 3*(1), 16-45

Isu, H. O., Nyako, A., El-Rufai, N. & Ahmed, A. (2002). *Public Policy and Implementation:*

Thoughts and Vision of the Obasanjo/Atiku Administration. Ibadan, Nigeria: Spectrum Books Limited.

KPMG. (2014). *Nigeria's Oil and Gas Industry Brief*. Lagos, Nigeria.

Kudus, A. (2011). Deregulation and Privatisation in Nigeria: Benefits and Challenges. *Paper Prepared for Industrial Sociology Seminar in the Department of Sociology, University of Ibadan*. Ibadan, Nigeria: University of Ibadan.

Majekodunmi, A. (2013). The Political Economy of Fuel Subsidy Removal in Nigeria. *International Journal of Management and Social Sciences Research*, *2*(7), 76-81.

Nigerian Institute of Social and Economic Research (NISER). (2010). *NISER Review of Nigerian Development, 2009/2010: Socio-economic Impact of Climate Change in Nigeria*. Ibadan, Nigeria: Author.

Kalejaiye, P. O., Adebayo, K., & Lawal, O. (2013). Deregulation and privatisation in Nigeria: The advantages and disadvantages so far. *African Journal of Business Management*, *7*(25), 2403-2409.

Maduka, A., Ihonre, H. & Anochiwa, L. (2015). Impact of Deregulation of the Downstream Oil Sector on Economic Growth in Nigeria. *EPRA International Journal of Economic and Business Review*, *3*(4), 19 -30.

Majekodunmi, A. (2013). The Political Economy of Fuel Subsidy Removal in Nigeria" *International Journal of Management and Social Sciences Research, 2*(7), 76-81.

Mariotti, S. (2015). What Every Voter Should Know About Public Choice Theory. Retrieved August 3, 2017 from http://www.huffingtonpost.com/steve-mariotti/what-every-voter-should-k_b_8217650.html

Matthews, D. (2013). RIP James Buchanan: The man who got economists to care about politics. Retrieved August 3, 2017 from https://www.washingtonpost.com/news/wonk/wp/2013/01/09/rip-james-buchanan-the-man-who-got-economists-to-care-about-politics/ 39

Monday, J. U., Ekperiware, M. C. & Muritala, B. R. (2016). Downstream Deregulation and Nigerian Economy. *Ecoforum, 5*(1), 207-214.

Nwachukwu, C. (2015). PIB, deregulation, bane of petroleum industry development. Retrieved August 3, 2017 from http://www.vanguardngr.com/2015/06/pib-deregulation-bane-of-petroleum-industry-development/

Ogwo, E. O., & Onuoha, A. O. (2013). The Imperative of Marketing in the Management of Deregulation: A Study of the Nigerian Downstream Oil Sector. *Asian Journal of Management Sciences and Education*, *2*(3), 1-10.

Okonjo-Iweala, N. (2012). Reforming the Unreformable: Lessons from Nigeria. Massachusetts, United States: MIT Press.

Olagunju, M. A. (1999). Economic Issues in Nigeria's Development. In J. O. Akinbi, (Ed.), *Towards a Better Nigeria: Reflections on Contemporary Issues in the Socio-Political and Economic Development of Nigeria* (pp. 98-108). Ibadan, Nigeria: Ben Quality Prints.

Olashore, O. (1991). *The Challenges of Nigeria's Economic Reform*. Ibadan, Nigeria: Fountain Publications.

Onyemaechi, J. O. (2012). Economic Implications of Petroleum Policies in Nigeria: An Overview. *American International Journal of Contemporary Research*, *2*(5), 60-71.

Owoeye, T. & Adetoye, D. (2016). Political Economy of Downstream Oil Sector Deregulation in *Nigeria. International Journal of Economics, Commerce and Management, 4*(5), 674-689.

Plumer, B. (2016). Why crude oil prices keep falling and falling, in one simple chart. Retrieved August 3, 2017 from http://www.vox.com/2016/1/12/10755754/crude-oil-prices-falling

PricewaterhouseCoopers (2015). *What next for Nigeria's economy? Navigating the rocky road ahead*. Lagos, Nigeria: Author.

Sabiu, B. S. & Reza, K. (2014). Effect of the Deregulation of Down Stream Oil Sector on the Gross Domestic Product (GDP) and Employment in Nigeria. *The Macrotheme Review*, *3*(3), 117-136.

Selznick, P. (1985). Focusing Organisational Research on Regulation. In R. Noll, (Ed.). Regulatory Policy and the Social Sciences. Berkeley: University of California Press.

Soni D. (2015). Oil workers to FG: Deregulate but don't sell Nigeria's wealth to exploiters. Retrieved August 3, 2017from http://www.vanguardngr.com/2015/12/oil-workers-to-fg-deregulate but-dont-sell-nigerias-wealth-to-exploiters/

Soyinka, A. (2012). Tackling the Subsidy Mess. *Tell Magazine*. 16 January. 46-57.

Stanley, R. (2016). 2016 Business Outlook: Petroleum Downstream Perspective (Mimeo) 15th March.

Temitayo, B. A. (2014). Law and Economics of Deregulation in Downstream Sector of the Nigerian Oil and Gas. *The International Journal of Science and Technology*, *2*(8), 99-104.

The Economist (2014). Over-reliance on oil spells trouble for Nigeria. Retrieved August 3, 2017 from http://www.economist.com/news/finance-and-economics/21635051-over-reliance-oil-spells-trouble-nigeria-well-below-par

The Economist (2015). The Economist explains: Rising oil prices. Retrieved August 3, 2017 from http://www.economist.com/blogs/economist-explains/2015/05/economist-explains-30

Todaro, M. P., & Smith, S. C. (2011). *Economic Development* (11th ed.). Edinburgh, England: Pearson Education Limited.

Umo, J. U. (2007). *Economics: An African Perspective* (2nd ed.). Lagos, Nigeria: Millennium Text Publishers Ltd.

White, B. (2000). *Dissertation Skills for Business and Management Students*. Singapore: Seng Lee Press.

SOCIAL SCIENCES & HUMANITIES

Contesting Linguistic Repression And Endurance: Arabic in the Andalusian Linguistic Landscape

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ABSTRACT

The present article portrays the use of Arabic in the Andalusian linguistic landscape (LL) where Arabic was used in the past as a lingua franca for eight centuries, banned since the Reconquest and is used nowadays as a minority language. Data were collected from road signs, public signs and signs in some specific places in the Andalusia region, field notes, and interviews with two informants. In the light of theories of ethnolinguistic vitality, language economy and power, and collective identity, the data analysis shows that Arabic is used in the Andalusian LL in three different circles, which are dissimilar to the three discourse frames found out in the previous study that identifies economic reasons as the main source of tension between the government's monolingualism ideology and the local people's ideology of multilingualism. In addition to commercial purposes, Arabic is apparent in Andalusia as a sign of vitality against language repression and as a way to build collective identity among the Muslims.

Keywords: Arabic language, Spanish history, the Andalusian linguistic landscape

INTRODUCTION

Linguistic landscape (LL) has been a focus of interest among a number of researchers. LL of an area can be used for two functions; an informational function and a symbolic function (Landry & Bourhis, 1997). The most fundamental informational function of LL is as a unique indicator of a region resided by a certain linguistic group of community. Thus, LL informs to the in-

group and out-group members of the linguistic characteristics, territorial limits and language boundaries they enter.

Finzel (2012) stated that LL may include graffiti, derived from Italian language 'graffito' which meant drawing or inscription (Basthomi, 2007), official and non-official announcements, or public notes. The word 'graffiti' has undergone changes in meaning and it is associated specifically to writings in public areas. In recent development, graffiti comprises any kinds of scratches, drawings, paintings, and signs on walls or any place writers/painters want to express their ideas.

Many studies on LL (Backhaus, 2007; Ehinger, 2014; Gorter, 1997; Hancock, 2012; Hult, 2014; Lanza & Woldemariam, 2014; Lawrence, 2012) have focused on the use of English in different places. However, little information on Arabic LL are available. The existing studies on LL where Arabic is discussed were administered by Botterman (2011); Koskinen (2012), and Mahajneh and Shohamy (2012). In Botterman (2011)'s study, the data were collected from the city of Ghent—Belgium, where Arabic is used in a Lebanese restaurant in an immigrant neighbourhood. Koskinen (2012) conducted a LL research in a suburb of Hervanta, Finland, where Arabic was the third most widely spoken langue after Finnish and Russian but could only be found once in the the 22 cases of the signage.

Unlike Botterman (2011) and Koskinen (2012)'s data collected from the European cities, Mahajneh and Shohamy (2012)'s report mentioned the high usage level of Arabic in certain places in Israel. Although

Arabic language has been institutionally defined as a minority language in Israel, Mahajneh and Shohamy's (2012) study showed that in the city of Ume El Pahem, the Arabic language could be found in about 90% of the signs in the internal road, 82% in roads connecting to the main freeway, 87% in secondary schools and 100% in middle schools.

LL studies have been conducted in Spain, for example, by Colomé and Long (2012), and Gorter, Aiestaran and Cenoz (2012). Colome and Long (2012) reported that Catalan dominates signs in the three streets in Barcelona and Arabic was predominant only in 2.5 per cent of the establishments. No Arabic-only sign is found and Arabic is always applied in signs together with Spanish or Catalan-Spanish. Furthermore, Gorter, Aiestaran and Cenoz (2012) collected data from the city of Donostia-San Sebastian in Basque Country where the government purposefully promoted Basque and Spanish to be used in public signs. Other languages, including Arabic, are also present there as minority languages.

Despite the previous studies dealing with Arabic in some settings, to the best of our knowledge, none has been done by putting Arabic as the main focus wherein Arabic previously functioned as a lingua franca in the Andalusia. However, during the Reconquest, Arabic was banned by the rulers and those who spoke Arabic were punished (Pharies, 2007; Surtz, 2006; Woolard, 2013). The current research seeks to identify the visibility of Arabic

in the Andalusian LL after the banishment of the language. Therefore, the current ethnographic study tries to answer the following research questions: "Is Arabic still apparent in the Andalusian LL?" "If it is so, how is it used?"

The theories of ethnolinguistic vitality (Landry & Bourhis, 1997), language economy and power (Cenoz & Gorter, 2009; Gorter, 2012), and collective identity (Ben-Rafael, 2009; Koskinen, 2012), as well as historical accounts on the use of Arabic during the Muslim era in 711-1492 (Bakar, 2016, pp. 107-108) are used to understand why Arabic can still be found in some specific areas despite the government's policy that puts Spanish as the only official language.

Landry and Bourhis (1997, p. 30) defined ethnolinguistic vitality (EV) as "the socio-structural factors that affect a group's ability to behave and survive as a distinct and active collective entity within multilingual settings." When a particular ethnic group is weaker in comparison to more dominant language groups, the former will tend to modify their linguistic communication closer to the dominant groups. Consequently, the linguistic inheritance of the subordinate groups may disappear.

Landry and Bourhis (1997, p. 29) stated that to maintain the vitality of their languages, rival language groups would make efforts to increase the 'visibility' of their own languages in the LL through private and government signs. Private signs can be in the forms of commercial signs in the storefront, shops, and so on. Government

signs include road signs, place names and inscriptions on government's buildings applied by the government. Backhaus (2007) classified government-related signs as 'top-down signs' and all others as 'bottom up'.

While public signs "directly reflect the economic, political, and cultural capital of the language group" (Landry & Bourhis, 1997, p. 34), the language policy exerted by the government may impact on what language will appear on public signs. The policy is usually directed at official signs but it can affect commercial signs and thus have economic impact (Cenoz & Gorter, 2009). Language policy may result in more frequent use of the supported language such as Basque in Donostia-San Sebastián (Gorter, Aiestaran, & Cenoz, 2012), Gaelic in Scotland and Wales (Hornsby & Vigers, 2012), and Sami in North Calotte (Salo, 2012). In other situation, however, the government's language policy might be neglected by local people as apparent in Dingle where people prefer to have multilingual practice which can give them more economic power (Moriarty, 2012). Hence, the current research aims to portray the vitality of Arabic in Andalusia against the government policy that banished its application in Spain during the Reconquest.

METHODS

In order to investigate Arabic in the Andalusian LL, we purposefully observed Islamic heritage sites in Andalusia province. We took photos of road signs, street signs, commercial board signs as well as place

signs along the roads from one site to another one in Cordoba, Sevilla, to Granada. Due to the centrality of the three cities in Islamic civilization in the Muslim era (Fuad, 2016; Mufrodi, 2016; Mukarrom, 2016) and the fact that important heritage sites can be found in the three cities nowadays, they were chosen as sites to be observed. Using ethnography, we observed the field and wrote field-notes, took photos and documented the co-occurrence of Arabic with other languages in the public spaces every one could enter in the heritage sites and the roads connecting them.

While more traditional approaches to the study of LL are quantitatively oriented in which all signs in particular area were documented by photographs, more recent approaches to LL research tend to be more ethnographically informed and focus more on critical examples illustrating theoretical issues (Lanza & Woldemariam, 2014, p. 497). Following the latter trend, our data included photos of 17 different items, which was rather small, of language use in the public spaces and Islamic heritage sites. In the present study, as we are not working towards a quantified analysis, we focused on variation rather than numerical data, so when there were repetitions of data, only one data was taken from one site (Koskinen, 2012). For example, there were numerous inscriptions of *wa laa ghaaliba illa Allah* on the wall of the Alhambra, but only one photo was used to represent the whole.

The current research analyzed data from signage photos, field-notes, and semi structured interviews with two informants,

YM and EG, selected by considering their linguistic background—both are native speakers of Spanish and are fluent in English and Arabic—and knowledge on Spanish society and history. With this background, the information related to the use of Arabic in Spanish LL the researchers collected from them has a strong basis and confirmation. YM is a Spanish holding a Master's degree born and lives in Granada. He has a good knowledge on the history of heritage sites in Spain. EG is a professor in a university in Sevilla whose interest lies in the Andalusia and religious studies.

The interviews with the informants were conducted several times. The first interview took place in a room in a university in Sevilla conducted with EG focused on general situation of the use of Arabic in Spain in the past and at present. It lasted for about 30 minutes carried out both in English and Arabic. To the researchers' questions related to possible places where Arabic inscription could be found, EG mentioned some heritage sites. He also confirmed the researchers' initial observation of the rare use of Arabic within the Spanish linguistic lanscape. Further interviews with him focused on the position of Arabic in Spanish history and in Spanish society nowadays.

A series of interviews with YM were executed in heritage sites and restaurants in the Andalusia that we visited. The interviews were manifested in simple, fact-related questions like, "What does this word mean?" to more complicated, opinion-based questions, such as, "If the government intended to erase Arabic from

Spanish language, why didn't they change all the toponyms derived from Arabic to Spanish names of places?" Details related to the history embedded in inscriptions in the signage also became parts of the interviews.

In analysing the data containing Arabic language, the researchers used their knowledge and skills in Arabic, consulted with dictionaries and YM who also has advance level of Arabic. Related to data containing Spanish language, the researchers mainly relied on YM's explanation on it.

RESULTS

Three clusters of the use of Arabic in Spanish LL were identified by the researchers after applying the theories of ethnolinguistic vitality (Landry & Bourhis, 1997), language economy and power (Cenoz & Gorter, 2009; Gorter, 2012), and collective identity (Koskinen, 2012) in analysing the data. State discourse circle, commercial sign circle, and Arabic as collective identity are three frames of the use of Arabic in Spanish LL.

State Discourse Circle

The government policy that puts Spanish as the only official language has a great impact on this cluster. Spanish language dominates signs in public spaces. Arabic inscriptions literally cannot be found in public spaces in the Andalusia province. With regard to road signs, all are written in Spanish using Latin characters.

Figure 1. Road Signs in Andalusia' Highways

However, data from the interviews show that various Spanish vocabulary derived from Arabic words can still be identified in road signs and place names. In the above road signs, some toponyms are derived from Arabic**,** such as**,** Jaen, Almeria, Archidona, and Iznajar. Jaen is derived from the Arabic word *jayyan*, which means crossroads of caravans. Almeria is from the Arabic word *al-mir'ah* or *al-meraya* meaning mirror or watch-tower. Archidona, from Arabic word *arsyiduuna*, means 'Guide us (oh Lord).'

Figure 2. A Road Sign in Sevilla

Similar to road signs in highways, road signs inside the cities of Andalusia are also written in the Latin Alphabet, and none is printed in Arabic alphabet although some of the toponyms and words are from the Arabic vocabulary. The word *alcazares* in Figure 2 is from the Arabic *alqashr* which means fortress.

Hence, in Andalusia, the government's signs in Landry and Bourhis (1997)'s term or official signs in Backhaus (2007, p. 56)'s term, are written in the Spanish language and Latin characters. This is because Spanish or Castilian is the only official language in the whole country in the modern Spain. Arabic inscription is no longer apparent in most places in public life. Arabic has been banished since the Reconquest started in the fifteen century (Pharies, 2007, p. 196). All traces of Muslim culture, including Arabic language and songs, were eradicated. A perfect example of the unforgiving punishment for those using Arabic, including songs and ballads, is the trial of Cristóbal Duarte Ballester, who spoke Arabic and fond of Islamic culture, in

1582 (Surtz, 2006). The harsh inquisition forced people to assimilate themselves with the Christian faith and culture and left their Arabic, Muslim culture, including the use of Arabic language and inscriptions (Pharies, 2007, p. 196; Woolard, 2013, pp. 64-65). Therefore, Arabic inscriptions cannot be found in most public places in the Andalusia nowadays.

However, Arabic's influence can still be seen from many of the existing Spanish vocabulary and terms. Our informant says that it is just impossible to erase the 'too many' Spanish words derived from the Arabic language because they are already blended within the lives of Spanish people. This just shows that Arabic has never completely disappeared from the Spanish people's lives as it had been with them for eight centuries between 711 and 1492 (Engelbrecht & Al Marzouqi, 2009; Fuad, 2016, p. 167).

Arabic has influenced Spanish language in terms of lexical aspect, syntax, morphology, phonology, and semantics (Rorabaugh, 2010, pp. 7-18). The Arab

influence on Spanish's words can be found in architecture, language, music (Shaath, 2016), administration, military, housing, agriculture, crafts, commerce, place-names (Pharies, 2007, p. 44). The greatest linguistic influence of Arabic on Spanish language is in lexical aspect (Pharies, 2007, pp. 40, 43-44, 182, 185). The Spanish nouns derived from Arabic are more than thirty Spanish toponyms (e.g., Tarifa and Gibraltar), military-related words (for instance, *adarga, and arrabal*), Moorish-created officials, architectural terms (for example, *fonda*), economic-related words (e.g., *alcancía,* and *arancel)*, agricultural terms (such as, *algodón, limón, acémila, rabadan, almazara)*, domestic life words (e.g., *recamar,* and *alcántara)* and academic-related terms such as algebra, *cifra* and *elixir*. The Islamic influence on the Spanish architecture cannot be denied since the Islamic architecture has impacted a wide range of both the secular and religious styles from the foundation of Islam to the present day of Spain.

In line with the Reconquest of Spain by the Christian power, the Muslim political power ended in Spain in 1492 (Bakar, 2016, p.125; Mukarrom, 2016, p. 211; Pharies, 2007, p. 45). The Andalusia was retaken by the Romance people in the north. Muslim symbols and Arabic language were strictly prohibited afterwards. The opposition to the use of that language was so strong that the banishment to speak Arabic became an important part of successive campaigns to assimilate Spain's Morisco population (Carr, 2009; Pharies, 2007, p. 196; Surtz,

2006, p. 529; Woolard, 2013, pp. 64-65). By the end of the 18th century, the identity of the indigenous Islam and the Morisco was considered to have vanished in Spain. Therefore, Arabic language has not been used since then. However, its influence cannot be totally removed from Spanish vocabulary, as we can witness from the existing Spanish words nowadays. This shows Arabic vitality againts language repression that occurred in the past.

Commercial Sign Circle

While the first circle abovementioned asserts that only Spanish may appear in public signs, the commercial sign circles allow other languages to be present. Tourism industry offers alternative for economic development in the area. This necessitates commodification of heritage sites by maintaining the authenticity of the sites. Arabic characters existing in heritage areas from the Muslim era add the marketability of the commodities.

Figure 3 shows *Reales Alcázares de Sevilla*, a royal palace in Sevilla. Originally developed by the Moorish Muslim kings, the palace is renowned as one of the most stunning building in Spain and as a most wonderful example of the mudéjar architecture in the Iberian Peninsula.

The Arabic script enlarged above is apparent in the entrance of the patio. It reads '*wa laa ghooliba illa Allah*', which means no conqueror except Allah. Similar calligraphy showing the Muslims's high inclination to God decorates many parts

Figure 3. The Alcazar of Sevilla

of the palace's walls. This also shows their humbleness in front of God, as well as their high expectation of Allah's mercy. Identical Arabic inscriptions are also available in the Alhambra alcazar and Cordoba mosque/cathedral.
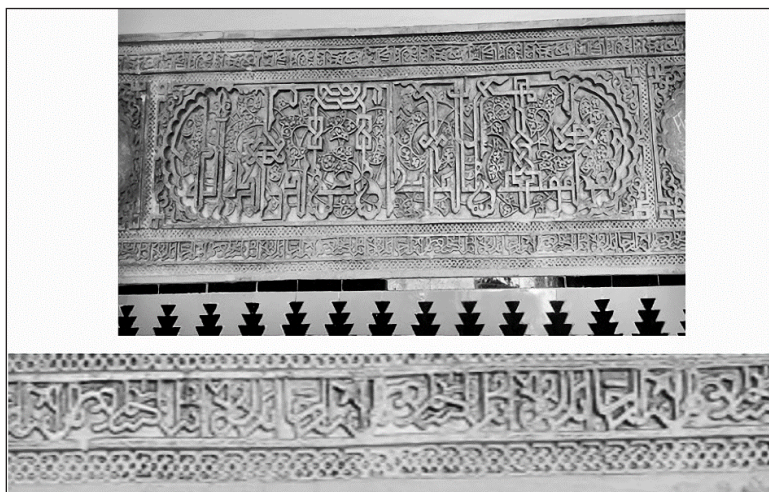
Figure 4. The Arabic Scripts Decorating the Alcazar of Sevilla

In addition to that, there are also Arabic inscriptions in various properties outside the buildings. The first one is the Arabic script of '*Laa ilaaha illa Allah*', which means 'no God but Allah' on a pole in the backyard of the Alcazar of Sevilla (Figure 5).

Figure 5. Arabic Script in a Pole in the Backyard of the Alcazar of Sevilla

The script is engraved on the pole/ column and thus it does not easily vanish although it was written a long time ago. The date of the life of Almu'tamid ibn Abbad' (1043-1095) is also engraved there. A member of the Abbadid dynasty, he was the third and last ruler of the taifa of Sevilla in the Andalusia. On the column, the Arabic script is positioned on top of all other scripts written in Spanish. This shows that the Arabic was the most important thing at the time of the inscription. The Spanish written below it is '*No hay mas dios que dios. ... resurreccion*' which means 'God decreed in Sevilla dead in our open graves in the resurrection.'

On the other side of the pole in Figure 5, "*La ciudad de sevilla ... Sevilla 1099*" was written. From this inscription, we know that this column was erected in the year of 1099, nine years after the King was exciled. It also contains the writing 'Rachab 384', which indicates the Islamic

calendar. Hence, the column is a sign to commemorate the last ruler of the taifa of Sevilla. It was written in two languages, the Arabic language in Arabic and Latin script, and Spanish in the Latin script. As the production and placement of this monument was commissioned by the official authorities of the kingdom at that time, we could expect that this official sign reflected the official language policy of the kingdom. In addition, the inscription is both in Arabic and Spanish languages, which signifies that the authorities allowed both languages to be used together. Thus, we should take into consideration of the fact that the linguistic situation of Spanish was rather different at that time. The column with its inscription is still there till this very day for the tourists to enjoy.

Another Arabic script can be found on a marble pole in Cordoba vicinity as illlustrated in Figure 6. This marble pole appears to be a product of the old time.

Here, the Arabic script is written below the latin script of the Spanish language. This bilingual sign shows that Spanish was used hand-in-hand with the Arabic script. Moreover, as this pole is located in a walkway, all people may have an access to it. It demonstrates that the creator of the pole wanted to communicate with the passers-by. Hence, it was not only the government that prescribed both Arabic and Spanish as languages for communication, but also people who used both languages in their communication. This situation is different from the LL of Spain today, where Spanish is the only official language.

In addition to heritage spots, Arabic inscriptions also appear in commercial spaces adjacent to the heritage sites. The Arabic inscription is visible on the wall of one of the shops in a small alley in Cordoba (Figure 7).

The signs in figure 7 consist of several languages indicating the same meaning: Spanish 'cueros de cordoba,' English,

Figure 6. The Arabic Script on a Marble Pole in Cordoba

'cordoba leathers,' Hebrew 'הבודרוק תורוע,' Arabic,'al jildiyah qurthubah bidluaat,' and French 'Cuirs De Cordoue.' This shows that the owner of the shop is trying to invite customers from different language backgrounds. Arabic language and inscription is used to merely attract

Figure 7. The Arabic Script at a Shop in Cordoba

Arab clients, just like other languages that are used for customers from different parts of the world.

It is clear from the data above that Arabic characters in heritage spaces and shops are maintained to invite more people, especially, Muslim or particularly Arab customers, to come. This is coherent with the use of minority languages, such as, Irish in Dingle (Moriarty, 2012), Gaelic in Scotland and Wales (Hornsby & Vigers, 2012), and Sami in North Calotte (Salo, 2012) to accentuate an exotic aspect of the area and as a way of selling an authentic product to prospective visitors and customers (Gorter, Marten & Mensel, 2012, p. 321).

Collective Identity Circle

Similar to Ben-Rafael's (2009); Koskinen's (2012), and Botterman (2011)'s data, the current research also found Arabic applied to build collective identity. Figure 8 illustrates the Arabic script inscribed in the *La mezquita de Granada* (The Mosque of Granada). The

first one is a calligraphy attached on the wall near the main entrance of the mosque. It reads, " *Yaa ayyuhalladziina amanu...*", which is quoted from the Qurán that means, "O, the believers. If you help Allah, He will help you. Therefore, keep your intention strong." The content of the first calligraphy is to motivate the Muslims to support the Islamic religion, to hold it strongly and to spread it to others. If they do so, Allah will help them. This message is intended only for Muslims since it is located inside the prayer room which can only be accessed by Muslims. Besides, the Quranic verse specifically mentions 'O, believers….'.

The second calligraphy is put outside of the main building. The calligraphy says, "*Wa laa ghaaliba illa Allah*", which means "And no conqueror except Allah." As it is put outside of the main building of the mosque, the Arabic inscription might be intended for both Muslims and non-Muslims who can understand Arabic. To Muslims, the inscription of "*Wa laa ghaaliba illa Allah*"

Figure 8. The Arabic Scripts in the Mosque

can mean "Allah is the only Conqueror. He can free them from any fearful feelings." If they believe in Allah, He will grant them victory and triumph. As most Mslims are subordinate in the society, in the mosque they project new identities to re-position themselves as individuals who are free from subordination. All human beings are equal before God; Only Him who are superior. Hence, there is a transformation of social structure in the mosque, and the inscription of "*Wa laa ghaaliba illa Allah*" helps them to share collective identity.

Figure 9. The Arabic scripts in the El-Sirio Restaurant

In addition to the inscriptions in the mosques, the Arabic inscriptions can also be found in restaurants. Pictures portrayed in Figure 9 show the signage on the façade of a restaurant located across the University of Seville. The first picture above shows the entire storefront of "Elsirio" restaurant. The name of the restaurant, 'Elsirio Restaurante Arabe', is written in the top part of the façade in Spanish. This is followed by the menu available at the restaurant. Both the name of the restaurant and menu are written in big-size Latin script. The menu is written in capitalized alphabets. Then, in the middle, both the Spanish and Arabic scripts of 'Halal restaurante' and '*Math'am halal*' are written in the same size and are equally present on a red background.

When considering the menu written on the right side of the door, we see that it is written in Spanish. This shows that Spanish readership/customers still dominate the restaurant. The decision of the shop-owner to display most information in Spanish can also be regarded as an illustration of a way to integrate oneself into a region that is officially Spanish-speaking. The presence of Arabic script there shows that the restaurant belongs to an Arab and it provides *halal* food. The Arabic script of '*Math'am halal*' is to inform potential customers who value the principles of *halal* that this is a place where halal food products can be obtained. This can also be interpreted as a symbolic marker of collective identity - the religious identity as Muslims.

An identical situation can also be seen in Aladdin Restaurant in Calle Juan Antonio Cavestany, Sevilla (Figure 10). A combination of Spanish and Arabic language scripts with Spanish as the dominant language can be seen here. The kinds of menu written in Spanish '*pollos asados, carnes a la brasa* and *tapas'* which means 'roast chicken, grilled meats and tapas' are written in big fonts, hence, become the point of attention. These are even more conspicuous than the name "Aladdin' itself. This implies that this restaurant expects its largest customers from the Spanish community. Near the entrance door is a red board containing Latin and Arabic scripts (second picture in Figure 10).

Figure 10. The Arabic Script in the Aladdin Restaurant, Sevilla

The name of the restaurant is written there in a different, unique font. Below the name is the Spanish script '*exotica comida de Jordania'* which means Jordan exotic food. This shows the clientel that this restaurant provides special food from Jordan. Underneath, an Arabic inscription appears to address Arab and Muslim customers. It says, "*al math'am aladdin lil makkulaati al-syarqiyyah*', indicating that the restaurant provides menus from the East". The word halal inscribed in Arabic is written in a very small font that makes it almost invisible. Next to the door, however, is a halal certificate that is put in a glass frame hung on the wall. Again, this is a way of building collective identity as Muslims who restrict themselves to only consume halal food.

It is true that in the cases of the two restaurants abovementioned, there is a commercial aspect similar to that in the commercial sign cluster. However, the need for commercializing the commodities by using Arabic inscription is not prevalent. Collective identity principle emphasizes to whom the actor belongs and wishes to attract potential clients on the basis of common predisposition (Ben-Rafael, 2009, p. 46). The word *halal* in Arabic inscriptions

informs to the passers-by that the owners of the restaurants are Muslims or those who prefer a good quality product and expect customers of identical likeness that choose only *halal* food to consume. This is matching to Koskinen (2012, pp. 88-89) and Botterman (2011, pp. 97-99) findings on a foodstore and a restaurant displaying Arabic scripts in their stores.

DISCUSSION

The abovementioned results of the research show that Arabic inscriptions are only apparent in heritage sites from Islamic era and some specific places expecting Muslims to come, i.e., mosques, shops, and halal restaurants. This is quite different from the research results of Mahajneh and Shohamy (2012) reporting that Arabic language dominates the city of Ume El Pahem's LL. The reason might come from the fact that Arabic language is an official language in Israel (Mahajneh and Shohamy, 2012, p. 139) while in Spain Arabic has been banished since the Reconquest started in the fifteen century (Pharies, 2007, p. 196).

The scarce existence of Arabic inscriptions in Spanish LL might be comparable to that in Botterman (2011), and Koskinen (2012) studies where Arabic inscriptions can only be found in Muslim/Arab restaurants. Although Arabic was once widely spoken and written in the Andalusia area, the government's policy that decides Spanish as the only official language in Spain makes other languages, including Arabic, in weaker position. This is also consistent to what has been mentioned by

Gorter (2012, p. 2) that language regulations imposed by the government can have a great influence on what signage will be present in the public space.

The use of different languages in the sign reflects the power, status, and economic importance of the different languages (Cenoz & Gorter, 2009). The results indicate that Arabic inscriptions are apparent in specific places, i.e., heritage sites, mosques, shops and restaurants. Heritage spots from Islamic era containing various Arabic inscriptions are well known for their magnificent architecture. This is a rich resource to generate revenue from tourism sector. Therefore, although Arabic language was forbidden in the past and is not encouraged nowadays, the Arabic inscriptions in the tourism spots are preserved for economic purpose.

In addition to this economic motivation, there is another purpose of putting Arabic alphabets in restaurants in the Andalusia area, that is, to show collective identity as Muslims. The intention of building collective identity among Muslims is also apparent in the application of Arabic letters in the mosque. Muslims are also encouraged to learn Arabic to understand the law contained in the Qur'an. The Qur'an written in Arabic is the source of law for Muslims. Therefore, the use of Arabic inscriptions in the mosque shows that the language has higher power and status in it and this is dissimilar to people outside of the boundary. This is in line with Garvin and Eishenhower (2016, p. 217) statement that collective identity projects identity which builds new

identities to re-position social actors and transform the social structure.

In short, the present research identifies three important findings. Arabic vocabulary can be traced in Spanish toponyms apparent in road signs. Arabic inscriptions are preserved in specific heritage sites and commercial areas due to economic reasons. Finally, Arabic characters are apparent in mosques and Muslim restaurants to show collective identity as Muslims. The three different domains of the use of Arabic in Spain are not identical to the three discourse frames in Moriarty (2012) study. In Moriarty's study, the three frames are noticeable mainly due to the tension between the government's policy to support Irish and the local people's need to apply more languages to attract tourists to come. Thus, the use of Arabic in Andalusia is not mainly for economic reasons, but it is also as a sign of vitality agaits the language repression in the past and a symbolic marker of collective identity as Muslims. This but shows the endurance of Arabic agaits the repression it received in the past.

CONCLUSION

In the Andalusian LL, Spanish is the official language. Arabic is one of the minority languages not observable in any official signs in modern Spain. Arabic is hidden in Spanish toponyms. Arabic scripts are only observable nowadays in heritage locations—mostly tourist destinations—hence it might be preserved for financial motivation. Arabic is also used in specific places dedicating their readership to Muslims.

This demonstrates the symbolic marker of Muslim collective identity. Hence, in addition to the economic reason (Moriarty, 2012), this study has unravelled other facets of the existence of Arabic in Andalusia: vitality agaits repression and collective identity marker.

REFERENCES

Backhaus, P. (2007). *Linguistic landscapes: A comparative study of urban multilingualism in Tokyo*. Clevedon: Multilingual Matters Ltd.

Bakar, M. R. A. (2016). Spanyol dalam dekapan Islam. In I. G. Said (Ed.). *Dari Mekah, Yerusalem sampai Cordova* (pp. 105-127). Surabaya: UINSA Press.

Basthomi, Y. (2007). An initial intimation of a yet banal discourse: Truck graffiti. *K@ta*, *9*(1), 34-48.

Ben-Rafael, E. (2009). A sociological approach to the study of linguistic landscapes. In E. Shohamy & D. Gorter (Eds.). *Linguistic landscape: Expanding the scenery*, (1st ed.) (pp. 40-54). New York, NY: Taylor and Francis.

Botterman, A. (2011). *Linguistic landscapes in the City of Ghent: An empirical study*. (Master Dissertation, Ghent University, Nederlands). Retrieved February 22, 2017 from http://lib.ugent.be/fulltxt/RUG01/001/786/702/RUG01-001786702_2012_0001_AC.pdf

Carr, M. (2009). *Blood and faith: The purging of Muslim Spain*. London: Hurst & Company.

Cenoz, J., & Gorter, D. (2009). Language economy and linguistic landscape. In E.Shohamy & D.Gorter (Eds.) *Linguistic landscape: Expanding the scenery*, (pp. 55-69). New York/London: Routledge.

Colomé, L. C., & Long, E. (2012). The Linguistic landscape of three streets in Barcelona: Patterns

of language visibility in public space. In D. Gorter, H. F. Marten, & L. V. Mensel (Eds.). *Minority languages in the linguistic landscape.* (pp. 148-163). New York: Palgrave Macmillan.

Ehinger, K. (2014). Multilingual Sheffield? A micro-study of the linguistic landscape of London road, Sheffield. *Special Issue: Inaugural ShefLing PGC Proceedings, 4-*5 February, 2014 (pp. 29-41). The University of Sheffield, UK.

Engelbrecht, G. & Al Marzouqi, L. (2009). Cucara macara! Arabic influence in the Spanish language. *Teachers, Learners and Curriculum, 4,* 1-5.

Finzel, A. M. (2012). *English in the linguistic landscape of Hong Kong: A case study of shop signs and linguistic competence* (Master Thesis, Universität Potsdam, Germany). Retrieved February 22, 2017, from file:///D:/Downloads/finzel_diss.pdf

Fuad, A. N. (2016). Cordova sebagai pusat politik dan peradaban Islam. In I. G. Said (Ed.). *Dari Mekah, Yerusalem sampai Cordova* (pp. 159-177). Surabaya: UINSA Press.

Garvin, R. T., & Eishenhower, K. (2016). Comparative study of linguistic landscapes in middle schools in Korea and Texas: Contrasting signs of learning and identity construction. In R. Blackwood, E. Lanza, & H. Woldemariam (Eds.). *Negotiating and contesting identities in linguistic landscapes.* New York, NY: Bloomsbury

Gorter, D. (2007). *The Linguistic landscape in Rome: Aspects of multilingualism and diversity.* [Working Paper, Istituto Psicoanalitico Per Le Ricerche Sociale, Roma]. Retrieved February 22, 2017, from file:///D:/Downloads/Gorter%20 2007%20Final%20report%20Roma%20study.pdf

Gorter, D., Aiestaran, J. & Cenoz, J. (2012). The revitalization of Basque and the linguistic landscape of Donostia-San Sebastián. In D. Gorter, H. F. Marten, & L. V. Mensel (Eds.).

Minority languages in the linguistic landscape (pp. 148-163). New York: Palgrave Macmillan.

Gorter, D., Marten, H. H., & Mensel, L. V. (2012). *Minority languages in linguistic landscape*. New York, NY: Palgrave Macmillan.

Gorter, D. (2012). Foreword: Signposts in the linguistic landscape. In C. Helot, M. Barni, R. Janssens, & C. Bagna (Eds.). *Linguistic landscapes, multilingualism and social change* (pp. 1-4). Frankfurt: Peter Lang Publishing Group.

Hancock, A. (2012). Capturing the landscape of Edinburg: A pedagogical tool to investigate student teachers' understandings of cultural and linguistic diversity. In C. Helot, M. Barni, R. Janssens, & C. Bagna (Eds.). *Linguistic landscapes, multilingualism and social change* (pp. 249-266). Frankfurt: Peter Lang Publishing Group.

Hornsby, M., & Vigers, D. (2012). *Minority semiotic landscape: An ideological minefield?* In D. Gorter, H. H. Marten., & L. V. Mensel (Eds.), *Minority languages in linguistic landscape*. New York, NY: Palgrave Macmillan.

Hult, F. M. (2014). Drive-thru linguistic landscaping: Constructing a linguistically dominant place in a bilingual space. *International Journal of Bilingualism, 18*(5)*,* 507-523. doi: 10.1177/1367006913484206

Koskinen, K. (2012). Linguistic landscape as a translational space: The case of Hervanta, Tampere. *Collegium: Studies across Disciplines in the Humanities and Social Sciences*, *13*, 73–92.

Landry, R., & Bourhis, R.Y. (1997) Linguistic landscape and ethnolinguistic vitality: An empirical study. *Journal of Language and Social Psychology, 16*, 23–49. doi: 10.1177/0261927X970161002

Lanza, E. & Woldemariam, H. (2014). Indexing modernity: English and branding in the linguistic

landscape of Addis Ababa. *International Journal of Bilingualism, 18*(5)*,* 491-506. doi: 10.1177/1367006913484204

Lawrence, C. B. (2012). The Korean English linguistic landscape. *World Englishes*, *31*(1), 70–92. doi: 10.1111/j.1467-971X.2011.01741

Mahajneh, M. A. G., & Shohamy, E. (2012). Linguistic landscape as a tool for interpreting language vitality: Arabic as a 'minority' language in Israel. *Research Gate.* Retrieved February 22, 2017, from www.researchgate.net/publication/279861334. doi: 10.1057/9780230360235_6

Moriarty, M. (2014). Contesting language ideologies in the linguistic landscape of an Irish tourist town. *International Journal of Bilingualism, 18*(5), 464-477. doi: 10.1177/1367006913484209

Mufrodi, A. (2016). Sevilla: Kota terbesar kedua setelah Cordova. In I. G. Said (Ed.). *Dari Mekah, Yerusalem sampai Cordova* (pp. 195-216). Surabaya: UINSA Press.

Mukarrom, A. (2016). Runtuhnya Granada dan implikasi kolonisasi Barat atas nusantara. In I. G. Said (Ed.). *Dari Mekah, Yerusalem sampai Cordova* (pp. 195-216). Surabaya: UINSA Press.

Pharies, D. A. (2007). *A brief history of the Spanish language*. Chicago: The University of Chicago Press.

Rorabaugh, D. (2010). *Arabic influence on the Spanish language*. [Research Report, Seattle Pacific University]. Retrieved February 22, 2017, from http://www.mast.queensu.ca/~rorabaugh/docs/ArabicInfluence.pdf

Salo, H. (2012). Using linguistic landscape to examine visibility of Sami languages in the North Calotte. In D. Gorter, H. H. Marten, & L. V. Mensel (Eds.), *Minority languages in linguistic landscape*. New York, NY: Palgrave Macmillan.

Shaath, N. (2016). *Arabic influence on the Spanish language* [Power Point Slides]. Retrieved February 22, 2017, from http://www.arabic-socal.com/PDF/Arabic-influence-on-the-Spanish-language.pdf

Surtz, R. E. (2006). Crimes of the tongue: The inquisitorial trials of Cristóbal Duarte Ballester. *Medieval Encounters, 12*(3)*,* 519-532.

Woolard, K. A. (2013). The seventeenth-century debate over the origins of Spanish: Links of language ideology to the Morisco question. *A political history of Spanish: The making of a language. Cambridge: Cambridge UP*, 61-76.

Changing the Learning Culture of Iranians: An Interplay between Method and Educational Policy

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ABSTRACT

The present study was an attempt to identify the effect of using a modern teaching technique, i.e. cooperative learning, in a changing system of educational policy on students' and parents' perceptions towards learning. So, 71 male students studying at seventh grade in four high schools were randomly selected to participate in the study. The students' parents (N=71) were asked to participate in the study to get their opinion on the matter as well. Using the cultural dimensions of learning framework, first the cultural aspects of students' perception towards learning were identified within eight categories. Then, the effect of cooperative learning on these dimensions was examined. Finally, the areas of changes were closely explored using open-ended questions. The results of the study revealed that some previously reported cultural features were evolving among students. The results also showed the effectiveness of cooperative learning in making significant shifts in cultural perceptions of the students. These results can be applicable for all those who are involved in the language teaching and learning process.

Keywords: Cooperative learning, cultural dimension of learning, educational policy

INTRODUCTION

The issue of nature or nurture is a long-debated one. Who we are cannot be easily distinguished from who we can

become. In other words, what we are now is an interwoven representation of the characteristics we were born with and the ones we have earned from our surroundings. It is acknowledged by many researchers that both nature and nurture play important roles in language acquisition (e.g., Bates, 1999; Gruber, 2013; Hughes et al., 2005; Meaney, 2001; Siegel, 1999). To separate these two seems an impossible task. However, researchers have been trying to characterize what are so-called individual (natural) and

group (nurtural) differences. What a person is nurtured with is often known as culture. An individual born in a specific cultural environment is affected by the beliefs, values, ideologies and whatever is around him or her. These cultural characteristics are known to influence every aspect of one's life. Learning is no exception to this fact. Consequently, various cultures challenge the perceptions of effective language learning among different nations.

Examples of these differences are reported by different scholars. Bennet (2003), for instance, refered to Asian students as having high tendency to be quiet in classes while European American students were known to take part in active classroom discussions. The difference also exists between parents from eastern cultures, who do not interfere with educational decisions, and European American parents, who volunteer in assisting teachers and being involved in the education of their children (e.g., Diaz, 2000; Valdés, 1996).

Although there is tremendous variability in the learning preferences within cultural groups (Gutiérrez & Rogoff, 2003), these differences are known to follow universal traits. These traits (see Table 1) are identified and introduced by different scholars (e.g. Hall, 1981; Hofstede, 1986; Hofstede & Hofstede, 2005; Levine, 1997; Lewis, 2006; Nisbett, 2003).

Nevertheless, the issue of culture is a concept with an extended range. The focus of this study, however, is on the cultural dimensions of teaching and learning English in Iran, which is representative of an EFL context. To this end, first the Iranian students and parent's cultural perceptions towards learning were explored followed by identifying the effect of cooperative learning on these perceptions to address the challenge of cooperative learning methods' instruction in Iran (e.g., Jahanbakhsh, 2014; Zarei, 2012).

An important effect of culture in learning, in general, and learning English, in particular, comes to the center of focus when comparing western and eastern countries. The eastern students, e.g. Iranians, are argued to be passive recipients of knowledge (e.g. Gow & Kember, 1990; Go & Mok, 1995). The teacher-centered classes, where learners are mostly mere listeners, are common among these countries. Such behaviors are, perhaps, the result of Confucianism where the ultimate goal of education was to reach the state of supreme virtue and wisdom. In order to reach the goal, one is expected to follow every lead of one's leader, i.e. teacher (Li, 2013, as cited in Zhang, 2015). This pursuit of the teacher has to be done without question since the leader knows best. Students, therefore, are prevented from exploring new knowledge. Although Confucianism is not a common practice in all eastern countries, the orientations in learning of countries such as China, Saudi Arabia, Iran, etc., until very recently have shown the characteristics of this ideology, though to different extents.

The cultural studies usually focus on the cross-cultural differences (e.g., Hofstede, 2001; House, Hanges , Javidan, Dorfman, & Gupta, 2004; Inglehart, 1997) among

the nations. While the body of literature is repleted with numerous studies on the learning styles, attitudes, and individual differences, there are a few researchers (e.g., Omidvar, Chan, Yap, & Boong, 2012) who have considered the group differences as an influential factor in learning and teaching, specifically in the context of Iran.

Iranian students have been following eastern perception towards learning. The context of education in Iran also was founded based on such beliefs. The Ministry of Education introduces the curricula and syllabi for each grade and expects students to only learn the introduced issues. The teachers are also expected to teach what is imposed on them by these syllabi. The learners are going to sit in a written exam at the end of each semester and their scores are mainly determined by these single exams. Therefore, the individualistic and competitive identities among students are reinforced and they only seek to take care of their own learning. The teachers are also considered as instructors of the materials and their attempts are aimed at enriching students with the knowledge that they may need in their final exam.

The literature has some information about the cultural behaviors of Iranians regarding teaching and learning. According to Noora (2008), for example, the culture of teaching in Iran was primarily teacher-centered. Omidvar et al. (2012) also reported Iranian learners as individualistic with a moderate tendency towards femininity. Some research (Askarzadeh, Elahi, & Khanalipour, 2009; Pishghadam & Pourali, 2011a, 2011b; Pishghadam & Navari, 2010; Pishghadam & Naji Meidani, 2011) has been conducted to investigate the students' and teachers' beliefs about language teaching and learning. The results of these studies showed major inclination, especially in the periods of educations in school and Bachelor programs in universities, towards the methods of teaching and learning which followed behaviorism principles. Such beliefs and cultural orientations have made application of communicative methods very challenging in Iranian contexts. Jahanbakhsh (2014), for example, addressing the influence of the competitive nature of educational contexts in Iran, stated that "in such a competitive culture, it may be very difficult to convince learners to learn in cooperative groups, particularly when they know they will be tested individually" (p. 96). However, while different issues about such beliefs and orientations are addressed from different perspectives, no attempt, to the best of the researchers' knowledge, has been made in specifying the learning dimensions of the culture among Iranians.

Furthermore, the recent change in the in the scoring system of the primary schools in Iran's educational system has made this study to look into a critical period of change. The previous numerical scoring system was replaced by a descriptive one. As a result, the students are not expected to compete for higher scores until they start junior high school. Therefore, the present study was conducted on the junior high first-grade students who are expected not to be deeply involved in the race for higher scores. This

study was interested to examine if students' involvement in cooperative learning at the right time could change their cultural perception towards learning. In line with this purpose and to address the problems just mentioned, the following research questions were formulated.

Q1: What are the cultural dimensions of the perceptions of Iranians towards learning?

Q2: Is there any significant difference between the perceptions of Iranian parents and students regarding the cultural dimensions of learning?

Q3: Does cooperative learning have any significant effect on the perception of Iranian students of the 7th grade towards learning?

Theoretical Background

Dimensions of Culture. Cultural factors are viewed as those aspects of culture that members of cultural groups have acquired, consciously or unconsciously, and carry with them where ever they go. As Hofstede (2011) maintained, it was "the collective programming of the mind that distinguishes the members of one group or category of people from others" (p. 3). It has always been considered as an essential part of any language teaching/learning situation (Akbari, 2008; Choudhury, 2014; Dema & Moeller, 2012). The two, actually are known as rigidly interwoven in a way that separation of one is not possible without losing the significance of the other (Brown, 2007).

Due to the complex nature of culture, providing a commonly-accepted framework is a challenging task. The first well-known categorization of culture was done by Hofstede (1980). In his national culture framework, Hofstede introduced four dimensions of power distance, individualism vs. collectivism, masculinity vs. femininity, and uncertainty avoidance. Later, two other dimensions, namely long-term vs. short-term orientations (Hofstede & Bond, 1988), and Indulgence vs. restraint (Hofstede, Hofstede & Minkov, 2010). Some other aspects of culture were also introduced by other researchers. Hall and Hall (1990), for example categorized nations based on the high vs. low context. Lewis (2006) added a social relationship as an indicator of the culture of learning in countries. A series of studies by Nisbett and colleagues (Nisbett, 2003; Nisbett & Masuda, 2003; Nisbett et al., 2001) also proposed the cognition shaped by the societal organization in ancient Greek and Chinese civilizations as the underlying cause of difference between the eastern and western countries. Finally, Levine (1997) and Hall (1983) introduced the dimensions of time to these cultural differences.

A more comprehensive framework was recently proposed by Patrick Parrish and Jenifer A. Linder-VanBerschot. In a series of works, Parrish and Linder-VanBerschot (2009a; 2009b; 2010) developed and validated a questionnaire, named the Cultural Dimensions of Learning Framework (CDLF), by incorporating the issues proposed by the above-mentioned

scholars into a comprehensive framework. Table 1, illustrates the components of CDLF. The present study has used this framework in investigating the participants' perceptions towards learning.

Table 1

Cultural Dimensions of Learning Framework (CDLF) (Adapted from Parrish and Linder-VanBerschot, 2010)

Cultural Dimension	Related issues and adaptation references
Social Relationship	
1. Equality and Authority	How is inequality handled? How is status demonstrated and respect given? What interactions are appropriate for those of unequal status? (Hofstede & Hofstede, 2005; Lewis, 2006)
2. Individualism and Collectivism	Which prevails—the interests of the individual or the interest of the group? To what degree are interpersonal relationships valued? (Hofstede & Hofstede, 2005; Nisbett, 2003)
3. Nurture and challenge	Which is the more important set of goals—cooperation and security or recognition and advancement? Which achieves better learning outcomes—supportive acts or challenging acts? (Hofstede & Hofstede, 2005)
Epistemological Beliefs	
4. Stability seeking and uncertainty acceptance	How is uncertainty dealt with? Is it avoided or accepted? Is structure assumed to be more important than flexibility? What is the status of knowledge—established or in a process of development? (Hofstede & Hofstede, 2005; Nisbett, 2003)
5. Logic argumentation and being reasonable	How are arguments developed? Which is more important—logical consistency or practical outcomes? How is disagreement managed? (Nisbett, 2003)
6. Causality and complex systems (analysis and holism)	How is causality assigned typically? Is it assigned to a single, most likely source, or is it assigned to the broader context? (Nisbett, 2003)
Temporal Perception	
7. Clock time and event time	Do people conform to an external measure of time, or do they allow the event at hand to unfold in its own time? Which are more important—deadlines or relationships? (Levine, 1997)
8. Linear time and cyclical time	Do people see time as a path and see goals as necessary destinations, or do they see time as a pattern of interlocking cycles into which they step in and out over the course of a life? (Hall, 1983; Lewis, 2006)

Cooperative Learning. Cooperative Learning (CL) roots date back to the social interdependence theory, cognitive developmental theory, and behavioral learning theory. Piaget's developmental theory (1954) and Slavin's (1995) cognitive theory assigned intrinsic motivation (IM) an enormous significance in learning and learners an operative role in constructing learning. The motivational theory also

pioneered the empirical investigation on CL; that is, the behavioral perspective which highlighted that CL is grounded on extrinsic motivation (EM) which results from rewards and tasks. Figure 1, below, demonstrates the theoretical perspective proposed by Slavin (1995).
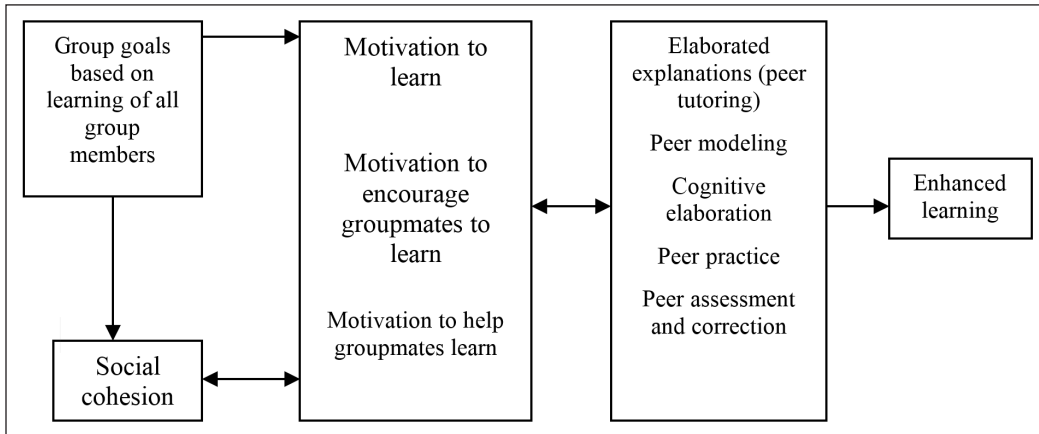
Figure 1. Integration of theoretical perspectives on cooperative learning effects on learning (Adapted from Slavin, 1995)

Proponents of cooperative learning (e.g., Johnson & Johnson, 1999; Johnson, Johnson, & Holubec, 1993; Slavin, 1995, 2011, Webb, 2002) address five elements as the principle factors, the administration of which are essential to achieve the ultimate goal of effective learning. These elements are: positive interdependence, individual accountability, promoting interaction, social skills, and group processing. Accordingly, the learners are engaged in the following: a dual duty of learning the material and making sure that all group members have done the same (positive interdependence) where every individual's efforts are accounted for (individual accountability) since "the team's success depends on the individual learning of all team members" (Jacobs, 2006, p. 5);

the face-to-face interaction in the groups which helps learners to promote each other's success and learn the social skills such as communication to manage conflicts, making decisions for the group, etc.; and the group processing where members' learning process are continuously analyzed (Webb, 2002).

Generally, these five elements are the defining bases for CL. Their incorporation in the process of teaching makes this technique successful. Each element has an effective interdependent role which differentiates this technique from the traditional ones. To achieve this goal, different methods of operationalization, such as Learning Together and Alone, Teams-Games-Tournaments (TGT), Jigsaw, Student Teams Achievement Division

(STAD), Team Accelerated Instruction (TAI), Cooperative Integrated Reading and Composition (CIRC) are offered for different purposes (Johnson, Johnson, & Stanne, 2000).

Many studies on factors affecting the learning have been done by both Iranian and foreign researchers (e.g., Dotson, 2001; George, 1994; Johnson et al., 2000; Mohammadi & Salimzadeh, 2009; Zarei, 2012). A synthesis of research on cooperative learning indicates that cooperative learning strategies improve the achievement of students and their interpersonal relationships. Johnson et al (2000) point out that cooperative learning strategies are widely used because they are based on theory, validated by research, and consistent with personal philosophies. The present study takes STAD as its operational method of cooperative learning to seek its effect on the cultural dimension of the learning due to following reasons. STAD is most appropriate for teaching well-defined objectives, such as mathematical computations and applications, language usage and mechanics, geography and map skills, and science facts and concepts. The number of confirming research studies on the effectiveness of STAD in teaching different courses, such as math, sciences, language and linguistics, and arts, in comparison to traditional methods is large (Johnson et al., 2000; Reid, 1992; Slavin, 1995; Zarei, 2012). Considering the requirements of the tasks provided in the students' coursebook, STAD can be easily incorporated to the process of teaching in the classroom.

METHODS

Participants

Seventy-one male students studying seventh grade in four junior high schools (Mirzaei-2, Mirmiran, Edalat, Bahonar) in Tehran, participated in the present study. They were all students of 7th grade in the educational system of Iran and their ages ranged from 12 to 14. Seventh grade is when the students start to learn English in Iran; thus, the students are at the beginning level of their language learning. Furthermore, due to the policies of the Ministry of Education in Iran, male teachers are not allowed to teach female students. That is why female students did not participate in the present study.

The students were asked to include either of their parents (N =71) to participate in the study to get their opinion on the matter as well. The questionnaires were answered by either of students' parents with their own consent. As a result, 29 fathers and 42 mothers with ages ranging from 31 to 48 contributed to the study. The whole process of the study was done by the consent of parents taken at the outset.

Procedure

Initially, the students and their parents were asked to answer the CDLF questionnaire. The perceptions of students and parents were analyzed to check if there were any significant differences at the outset. Subsequently, the researcher taught English using STAD (a method of cooperative learning) during the first semester of the educational year (one session per week

for four months). The method requires the students to works in groups of 3 or 4 members to reach the group score. The participants' assignments to the groups were done, based on their experience in learning English outside the school, in the first session by the teacher. Each group consists of a head, who had at least two years of experience in learning English; an assistant who had a lower number of years of experience; and two other members with little or no experience.

In STAD, the teacher presented a lesson. Then, students worked within their teams to make sure that all team members had mastered the lesson. Finally, students took individual quizzes on the material, at which time they could not help one another. Students' quiz scores were compared to their own past averages, and pointed based on the degree to which students met or exceeded their own earlier performances. These points were then summed to form team scores, and teams that met the assigned criteria were rewarded. The students were told that they will receive a group score not an individual score, which is the mean score of the group members plus extra-scores for the groups who have shown progress or great contribution to each session's lesson, at the end of the semester.

At the end of the semester, the students were asked to answer the same CDLF questionnaire. Their results were analyzed and the changes in respect to their answers at the outset were identified. Then, both students and parents were asked to answer 6

open ended questions which aimed to further explore the dimensions which showed changes.

Design

The present study followed a mixed methods design to provide both descriptive and referential answers to the raised questions. Random sampling was done to select four classes in four different schools in Tehran. However, due to the limitations explained above, the sampling was done only from among schools with male students. After getting permission from the Ministry of Education, the corresponding author took the responsibility of teaching English courses in these schools and ran the treatment.

Instruments

Two measurement instruments were used in this study: the CDLF questionnaire and open-ended questions. The CDLF is a questionnaire developed by Parrish and Linder-VanBerschot (2009b). The questionnaire examined the subjects' cultural dimensions of the perceptions towards learning using 36 Likert-scale items in three main categories and eight subcategories (see Table 1). Since the students were not competent enough to understand the English version of the questionnaire, it was translated into Persian. The reliability of the questionnaire was estimated using Cronbach's alpha formula (Table 2). The results assured the researchers that the instrument had an acceptable index of reliability. A factor analysis was also done

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and the three underlying components of the questionnaire as well as the subcategory contributions to these components were acknowledged (see Appendix A). The reliability index proved to be acceptable.

Table 2
Reliability Index of CDLF questionnaire

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.690	0.675	36

RESULTS

As mentioned before, prior to the treatment, the participants' perceptions towards learning were sought using the Persian translation of the CDFL questionnaire. In order to answer the first research questions, the mean score of the participants' answers to each dimension of the CDFL were explored. Table 3, presents the descriptive statistics of the results. Using Chi-square Test of Independence (Table 4), the significances of the results were also examined for each sub-category.

Table 3
Descriptive Statistics of the Participants' answers to CDLF questionnaire

		Group				
		N	Mean	Minimum	Maximum	SD
Equality/Authority	Parents	71	5.47	1.00	10.00	2.28
	Students	71	4.98	1.00	9.33	2.20
	Total	142	5.23	1.00	10.00	2.25
Individualism/ Collectivism	Parents	71	6.4	1.0	10.0	2.6
	Students	71	5.9	2.0	9.5	2.0
	Total	142	6.2	1.0	10.0	2.3
Nurture/Challenge	Parents	71	4.26	1.20	8.80	2.08
	Students	71	4.88	1.60	10.00	1.85
	Total	142	4.57	1.20	10.00	1.99
Stability seeking/ Uncertainty acceptance	Parents	71	6.22	2.33	9.33	1.80
	Students	71	5.57	2.83	8.00	1.47
	Total	142	5.89	2.33	9.33	1.67
Logical argumentation/ Being reasonable	Parents	71	4.93	1.00	9.33	2.07
	Students	71	5.38	1.67	10.00	2.07
	Total	142	5.15	1.00	10.00	2.07
Causality/Complex system	Parents	71	5.15	1.25	8.00	1.84
	Students	71	4.88	2.75	8.00	1.57
	Total	142	5.01	1.25	8.00	1.71
Clock time/Event time	Parents	71	6.46	2.25	10.00	1.69
	Students	71	5.65	1.00	8.75	1.64
	Total	142	6.06	1.00	10.00	1.71
Linear time/Cyclical time	Parents	71	5.63	3.17	10.00	1.44
	Students	71	5.75	2.50	8.50	1.37
	Total	142	5.69	2.50	10.00	1.40

The results show that Iranians are authority-oriented, collectivist, nurturing, accepting of uncertainty, reasonable, event-focused, and cyclical-time oriented (see Appendix B for the distribution of average survey scores for each dimension). However, examining causality/complex factor showed no significant inclination towards either. In other words, the students could not be categorized as either analytic or holistic.

Furthermore, the perceptions of the students and parents were compared in this phase (Table 5). As the results indicated, students and parents had different inclinations in cases of stability seeking/uncertainty avoidance ($U = 1914$, $p = .013 < .05$) and clock-focus/event-focus ($U = 1822$, $p = .004 < .05$): parents were more accepting of uncertainty and more event-focused than students.

Table 4
Chi-Square test of independence; the significance of the observed over expected results

	Equality/ Authority	Individualism/ Collectivism	Nurture/ Challenge	Stability seeking/ Uncertainty acceptance	Logical/ reasonable	Causality/ Complex	Clock/ Event	Linear/ Cyclical
Chi-Square	80.789	44.662	60.817	47.930	61.761	30.732	58.310	63.775
Df	21	28	29	30	22	23	25	29
Asymp. Sig.	0.000	0.024	0.000	0.020	0.000	0.130	0.000	0.000

Table 5
Mann-Whitney U-Test; the difference between the perceptions of students and parents at the outset

	Equality/ Author-ity	Individ-ualism/ Collec-tivism	Nurture/ Challenge	Stability seeking/ Uncertainty acceptance	Log-ical/ reason-able	Cau-sality/ Com-plex	Clock/ Event	Linear/ Cycli-cal
Mann-Whitney U	2186.0	2125.500	2172.0	1914.0	2173.5	2267.0	1822.0	2225.5
Wilcoxon W	4742.0	4681.500	4728.0	4470.0	4729.5	4823.0	4378.0	4781.5
Z	-1.369	-1.614	-1.424	-2.477	-1.419	-1.036	-2.855	-1.205
Asymp. Sig. (2-tailed)	0.171	0.107	0.154	0.013	0.156	0.300	0.004	0.228

The next administration of the questionnaire was done after the treatment ended. Table 6 shows the descriptive statistics of the results for pretest and posttest.

Table 6
Descriptive statistics of the students' answers to CDLF questionnaire prior and after treatment

	Test	N	Mean	Minimum	Maximum	SD
Equality/Authority	Pretest	71	4.98	1.00	9.33	2.20
	Posttest	71	4.78	1.00	8.33	1.93
Individualism/Collectivism	Pretest	71	5.91	2.00	9.50	1.97
	Posttest	71	6.01	3.00	9.50	1.85
Nurture/Challenge	Pretest	71	4.88	1.60	10.00	1.85
	Posttest	71	4.76	1.60	8.60	1.69
Stability seeking/ Uncertainty acceptance	Pretest	71	5.57	2.83	8.00	1.47
	Posttest	71	5.40	2.83	7.83	1.35
Logical argumentation/ Being reasonable	Pretest	71	5.38	1.67	10.00	2.07
	Posttest	71	5.54	2.33	10.00	1.95
Causality/Complex system	Pretest	71	4.88	2.75	8.00	1.57
	Posttest	71	4.90	2.75	8.00	1.54
Clock time/Event time	Pretest	71	5.65	1.00	8.75	1.64
	Posttest	71	5.63	1.25	8.75	1.61
Linear time/Cyclical time	Pretest	71	5.75	2.50	8.50	1.37
	Posttest	71	5.73	2.50	8.50	1.34

Looking into the difference in mean scores of pretest and posttest in Table 6, the changes are evident in some cases, namely, Equality/Authority; Individualism/ Collectivism; Nurture/Challenge; Stability seeking/ Uncertainty acceptance; and Logical argumentation/Being reasonable.

In order to test the significance of the difference between the two administrations of CDLF, a Wilcoxon Signed Ranks Test was run (Table 7).

As is evident from the results, cooperative learning had a significant effect on students' cultural dimensions of the perceptions towards learning; it caused inclinations towards equality ($Z= 3.106$, p = .002<.05), collectivism ($Z = 3.624$, p = .000< .05), nurturing ($Z = 3.335$, p = .001 < .05), uncertainty acceptance ($Z = 4.025$, p = .000 < .05), and being reasonable ($Z = 3.86$, p = .000 < .05).

Furthermore, in order to further dig into the participants' perceptions after the treatment, six open-ended questions were asked to both students and parents. A brief presentation of the answers is provided in Table 8.

Table 7
Wilcoxon Signed Ranks Test; students' answers to CDLF questionnaire prior and after treatment

	Equality/ Author-ity	Individual-ism/ Collec-tivism	Nurture/ Challenge	Stability seeking/ Uncertainty acceptance	Logical/ reasona-ble	Causali-ty/ Com-plex	Clock/ Event	Linear/ Cyclical
Z	-3.106^a	-3.624^b	-3.335^a	-4.025^b	-3.860^b	-1.147^b	-1.604^a	-1.579^a
Asymp. Sig. (2-tailed)	0.002	0.000	0.001	0.000	0.000	0.251	0.109	0.114

a. Based on negative ranks

b. Based on positive ranks

The categories mentioned in the table are made by the researchers based on the interpretation of the participants' answers to the questions. The results in Table 8 both confirm the changes in students' perceptions, as demonstrated in Tables 6 and 7 and the possible changes of their parents' perceptions in the given categories. Comparing these results to the initial results of the questionnaire presented in Table 3, one can see that parents have kept their inclination towards authority and being reasonable. Besides, while the parents have shown to be significantly more inclined towards uncertainty acceptance than students were prior to the treatment (see Table 5), the students grew more inclination towards acceptance of uncertainty after the treatment. The differences between the perceptions of students and parents in this phase were sought using Chi-Square Test of Independence (Table 9).

Table 8
The frequency of the participants' answers to the open-ended questions

			GROUP			
			PARENTS		STUDENTS	
			N	%	N	%
Equality/ Authority	Q1: How should the relationship between teachers-parents/ teachers-students be?	Formal	54	76.1%	36	50.7%
		Intimate	17	23.9%	35	49.3%
Individualism/ Collectivism	Q2: Which type of learning is more effective?	Cooperative learning	56	78.9%	62	87.3%
		Individual learning	10	14.1%	5	7.0%
		Others	5	7.0%	4	5.6%
	Q3: How much responsibility should a person have in CL?	High	40	56.3%	43	60.6%
		Average	27	38.0%	26	36.6%
		Low	4	5.6%	2	2.8%

Table 8 *(continue)*

			GROUP			
			PARENTS		STUDENTS	
			N	%	N	%
Nurture/ Challenge	Q4: Which type of study do you prefer?	Cooperation	37	52.1%	45	63.4%
		Competition	26	36.6%	24	33.8%
		Both	8	11.3%	2	2.8%
Stability seeking/ Uncertainty acceptance	Q5: Will you contribute to the group discussions if you are not sure your answer is correct	Yes	41	57.7%	40	56.3%
		No	26	36.6%	28	39.4%
		It Depends	4	5.6%	3	4.2%
Logical/ Reasonable	Q6: How do you utter your opinion in group work when you are sure you're right?	I accept others' opinion	36	50.7%	44	62.0%
		I insist	31	43.7%	17	23.9%
		Both	4	5.6%	10	14.1%

Table 9
Chi-Square Test; the difference between students' and parents' perceptions after the treatment

			Value	df	Asymp. Sig (2-sided)
Equality/ Authority	Q1	Pearson Chi-Square	9.831[a]	1	0.002
		Likelihood Ratio	9.986	1	0.002
		Linear-by-Linear Association	9.762	1	0.002
		N of Valid Cases	142		
Individualism/ Collectivism	Q2	Pearson Chi-Square	2.083	2	0.353
		Likelihood Ratio	2.116	2	0.347
		Linear-by-Linear Association	1.123	1	0.289
		N of Valid Cases	142		
	Q3	Pearson Chi-Square	0.794	2	0.672
		Likelihood Ratio	0.807	2	0.668
		Linear-by-Linear Association	0.525	1	0.469
		N of Valid Cases	142		
Nurture/ Challenge	Q4	Pearson Chi-Square	4.460	2	0.108
		Likelihood Ratio	4.717	2	0.095
		Linear-by-Linear Association	3.507	1	0.061
		N of Valid Cases	142		
Stability seeking/ Uncertainty acceptance	Q5	Pearson Chi-Square	0.229	2	0.892
		Likelihood Ratio	0.230	2	0.891
		Linear-by-Linear Association	0.000	1	1.000
		N of Valid Cases	142		
Logical/ Reasonable	Q6	Pearson Chi-Square	7.455[a]	2	0.024
		Likelihood Ratio	7.601	2	0.022
		Linear-by-Linear Association	0.063	1	0.802
		N of Valid Cases	142		

The results indicated the difference in the perceptions of students and parents in the cases of equality/authority ($\chi^2_{(1)}$ = 9.831, p = .002 < .05) and logical/reasonable ($\chi^2_{(2)}$ = 7.455, p = .024 < .05).

DISCUSSION AND CONCLUSION

The first finding of the study was the acknowledgment of the construct validity of the questionnaire. Recently, Hunt and Tickner (2015) questioned the validity of the questionnaire, asserting that "a number of the items might not be indicators of these [(the framework's)] dimensions" (p. 37). The results of this study, however, proved it otherwise.

Secondly, the participants showed significant inclinations towards being authority-oriented, collectivist, nurturing, accepting of uncertainty, reasonable, event-focused, and cyclical-time oriented while no significant inclination was indicated in the case of causality/complex system (being analytic/holistic). This was followed by significant differences in the case of uncertainty acceptance and being clock/event focused between the parents and students; the parents being more accepting of uncertainty and more event-focused.

The above-mentioned characteristics was followed by a course of shift by students towards being equality-oriented, collectivist, nurturing, accepting of uncertainty, and reasonable as a result of participating in cooperative learning activities. Even the parents who were not directly exposed to the activities showed the same inclinations in some aspects. Such results are indicative

of one certain rule: culture is a varying phenomenon. It was also an evidence for the consistent effect of the members of culture on each other. As Choudhury (2014, p. 2) pointed out, "[culture] is a fragile phenomenon. It is constantly changing and easily lost because it is only in our mind". It is, thus, not wise to call members of a country, community, or region holding certain cultural features and assume them invariant. The shift, however, was not one-sided. The students started to be more accepting of uncertainty after the treatment as the participants did before it. The exploration of the open-ended questions revealed that this change was only partially due to the treatment and the students' perceptions had several clues that could be related to the perception of their parents. For example, those who insisted on individual learning had parents who believed in essentiality of individual assessments of their children's work.

Another point is that the findings of the study were supportive of the prior information (e.g., Hofstede, 1986; Noora, 2008; Omidvar et al., 2012) about Iran provided in the literature in some aspects, e.g. having low power distance, being accepting of uncertainty. In other aspects, though, there were some contradictory points, i.e., unlike the results of the present study, the above-mentioned studies had identified Iranian leaners as slightly individualistic and competitive (challenging). However, as Hofstede (1986) cautiously warned us, the cultural descriptors were of extremes, and that most societies could not be

characterized in such absolute terms but fell along a continuum between the extremes. One should also be aware of the evolving nature of culture. To quote Parrish and Linder-VanBerschot (2010), "deep-rooted as culture may be, a description of any culture is merely a snapshot of a continually evolving matrix of beliefs, values, and behaviors developed through the creative interactions" (p. 4).

The main finding of the study was the effectiveness of the cooperative learning method on changing the perceptions of students towards supporting such methods. The participants were deliberately chosen from 7th grade in junior high school to have a sample which was assumed to be less-adopted to the individualistic system of scoring in Iran. It is believed (e.g., Zarei, 2012) that the problem of culture of learning/teaching EFL contexts such as Iran is the focus on grammar translation in the examination system. Consequently, the learners get accustomed to study only for the sake of passing the exam.

Such tendencies were, perhaps, one of the major reasons that the English books for junior and senior high school classes assigned by the Ministry of Education served as the learning material for more than 25 years in Iran. The books followed the principles of the Grammar-Translation Method (GTM) and methods that enhanced the use of reading and writing skills where speaking and listening were almost ignored. These books continued to serve their purposes until just recently while there had been large amounts of researches

which suggested the use of communicative language teaching (CLT) and task-based teaching/leaning. Finally, the Ministry of Education introduced new sets of books, i.e. *Prospect* series for junior high school and *Vision* series for senior high school, which followed the principles of CLT. Consequently, the use of cooperative learning methods was encouraged among teachers.

While under the influence of traditional culture, less attention is paid to creative expression, critical thinking, and problem solving, the results of the present study indicate that such tendencies are not absolute. The change in the system of education provides the pre-requisite for shifting towards modern ways of learning and teaching. It seems that choosing the right time to start, and right material to be engaged with, is an important influence in leading the students towards the assimilation to a kind of perception which encourages the modern techniques of teaching and learning.

Investigating the participants' answers to open-ended questions was also suggestive of an important issue: they considered their experience with cooperative learning as innovative, interesting, and fruitful. As previously mentioned, the Iranian educational system has been under the influence of traditional methods. The lack of exposure to modern methods might be an important cause of the claimed predominant inclination towards the traditional culture of learning. Choosing to expose the learners to the refreshing modern methods of teaching and learning before they have got

accustomed to the old culture might be a significance impact in shifting the learning culture among them.

At present, the discourse of professional teachers and their sources of reading are heavily reliant on what is produced in major Western universities and although the methodical approaches of such authorities are quite remarkable, one wonders if the variables which they choose are always the most pertinent to the contextual and cultural realities of different environments and circumstances. The present study, however, would be a good reference for Iranian teachers to rely on. The results indicate that if the ground is paved, the students may go towards cooperation, despite what has been dominant in Iran's educational context, i.e. individual learning and competition instead of cooperation. The starting point to lead learners towards such behaviors is recommended to move further back to their early years of learning. The shift might be gradual but promising. Learners also may understand the importance of cooperation and seek to learn together instead of compete against each other. Material developers also may start to bring more cooperative tasks to the workbooks that facilitate this process.

The results of present study may shed light on a method that can help teachers and learners to overcome this shortcoming in their classroom. The findings of the present study can also have implications for theorists, teachers and learners, and syllabus designers.

It should not be left unmentioned that what one perceives might be a mixture of what one does and what s/he wants to do. In other words, the perceptions reported here are likely to be the mixture of participants' ideal as well as existing perceptions about learning. Such differences are shown in the works of Iranian researchers (Pishghadam & Naji Meidani, 2011; Pishghadam & Navari, 2010). Narrowing down the gap between the perception and actualization of such perceptions is not an easy task and needs lots of research and effort.

Finally, the present study faced some limitations. Only male students participated in the study. The results, thus, may only be generalizable to male students. Further research can be done in the future to see if gender is a determining factor. Also, while STAD was used as the operational method of modern teaching in this study, other methods also may be examined in studies within frameworks similar to the present study.

REFERENCES

Akbari, R. (2008). Transforming lives: introducing critical pedagogy into ELT classrooms. *ELT Journal, 62*(3), 276-283.

Askarzadeh, T. R., Elahi, M., & Khanalipour, S. (2009). Examining Iranian EFL learners' and teachers' beliefs about teachers through metaphor analysis. *The Iranian EFL Journal, 5*, 115-138.

Bates, E. (1999). On the Nature and Nurture of Language. In R. Levi-Montalcini,. D. Baltimore, R. Dulbecco, & F. Jacob (Series Eds.) & E. Bizzi,

P. Calissano, & V. Volterra (Vol. Eds.), *Frontiere della biologia [Frontiers of biology]*. The brain of *H. sapiens* Rome: Giovanni Trecanni.

Bennett, C. I. (2003). *Comprehensive multicultural education: Theory and practice.* Boston, MA: Allyn and Bacon.

Brown, H. D. (2007). *Principles of language learning and teaching.* NY: Pearson Education.

Choudhury, R. U. (2014). The role of culture in teaching and learning English as a foreign language. *International Journal of Multi Disciplinary Research, 1*(4), 1-20.

Dema, O. & Moeller, A. K. (2012) *Teaching culture in the 21st century language classroom*. University of Nebraska – Lincoln: Faculty Publication. Retrieved March 19, 2017 from http://digitalcommons.unl.edu/teachlearnfacpub/181

Diaz, R. (2000). *Latina parent educational participation: a pro-active approach.* Unpublished dissertation, University of California, Los Angeles.

Dotson, J. (2001). Cooperative learning structures can increase student achievement. *Kagan online magazine*. Retrieved March 19, 2017 from http://www.kaganonline.com/Training/index.html

George, G. P. (1994). The effectiveness of cooperative learning strategies in multicultural university classrooms. *Excellence in College Teaching, 5*(1), 21-30.

Go, F. & Mok, C. (1995). Hotel and tourism management education: Building a centre of excellence in Hong Kong. *Tourism Recreation Research, 20*(2), 46-57.

Gow, L. & Kember, D. (1990). Does higher education promote independent learning? *Higher Education, 19*, 307-322.

Gruber, T. R. (2013). Nature, nurture, and knowledge acquisition. *International Journal of Human-Computer Studies 71*(2):191–194.

Gutiérrez, K., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher, 22*(5), 19-25.

Hall, E. T. (1981). *Beyond culture*. New York: Random House.

Hall, E. T. (1983). *The dance of life*. New York: Doubleday.

Hall, E. T., & Hall, M. R. (1990). *Understanding cultural differences*. New York: Inter-cultural Press.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values.* Beverly Hills, California: Sage Publications

Hofstede, G. (1986). Cultural differences in teaching and learning. *International Journal of Intercultural Relations, 10*, 301-320.

Hofstede, G. (2001). *Culture consequences: Comparing values, behaviours, institutions, and organizations across nations* (2nd ed.). Thousand Oaks: Sage Publications.

Hofstede, G. (2011). Dimensionalizing cultures: the Hofstede model in context. *Online Readings in Psychology and Culture, 2*(1). Retrieval March 19, 2017 from http://dx.doi.org/10.9707/2307-0919.1014

Hofstede, G., & Bond, M. H. (1988). The Confucius connection: from cultural roots to economic growth. *Organizational Dynamics, 16*, 4-21.

Hofstede, G., & Hofstede, G. J. (2005). *Cultures and organizations: Software of the mind* (2nd ed.). New York: McGraw-Hill.

Hofstede, G., Hofstede, G. J. & Minkov, M. (2010). *Cultures and organizations: software of the mind* (Rev. 3rd ed.). New York: McGraw-Hill.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (Eds.). (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.

Hughes, C., Jaffee, S. R., Happe, F., Taylor, A., Caspi, A., & Moffit, T. E. (2005). Origins of individual differences in theory of mind: from nature to nurture? *Child Development, 76*(2), 356-370.

Hunt, A. N., & Tickner, S. (2015). Cultural dimensions of learning in online teacher education. *Journal of Open, Flexible and Distance Learning, 19*(2), 25–47.

Inglehart, R. (1997). *Modernization and postmodernization: cultural, economic, and political change in 43 societies*. Princeton, NJ: Princeton University Press.

Jacobs, G. (2006). *Cooperative Learning and Second Language Teaching*. Cambridge: Cambridge University Press.

Jahanbakhsh, A. A. (2014). *The Comparative Effect of Student Teams Achievement Division and Cooperative Integrated Reading and Composition on EFL Learners' Lexical Collocation Learning*. Unpublished Master Thesis, Islamic Azad University at Central Tehran, Tehran, Iran.

Johnson, D. W., & Johnson, R. T. (1999). Making cooperative learning work. *Theory into Practice. 38* (2). 67-73.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1993). *Circles of learning* (4th ed.). Edina, MI: Interaction Book Company.

Johnson, D. W., Johnson, R. T., & Stanne, M. (2000). *Cooperative learning methods: A meta-analysis*. Retrieved March 19, 2017 from www.Clcrc.com/pages/clmethods.html

Levine, R. (1997). *A geography of time*. New York: Basic Books.

Lewis, R. D. (2006). *When cultures collide: Leading across cultures* (3rd ed.). Boston: Nicholas Brealey International.

Meaney, M. J. (2001). Nature, nurture, and the disunity of knowledge. *Annals of the New York Academy of Sciences 935*, 50-61.

Mohammadi, M., & Salimzadeh, R. (2009). The effect of cooperative learning strategy training on reading comprehension and motivation of EFL learners. *Paper presented at 7th international conference TELLSI*, Yazd, Iran.

Nisbett, R. E. (2003). *The geography of thought: How Asians and westerners think differently... and why*. New York: Free Press.

Nisbett, R. E., & Masuda, T. (2003). Culture and point of view. *Proceedings of the National Academy of Sciences of the United States of America, 100*(19), 11163-11175.

Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: holistic versus analytic cognition. *Psychological Review, 108*(2), 291-310.

Noora, A. (2008). Iranian undergraduate non-English majors' language learning preferences. *GEMA Online Journal of Language Studies, 8*(2), 33-44.

Omidvar, P., Chan, M. Y., Yap, N. T., & Boong, J. (2012). Learning culture of Iranian and Chinese-Malaysian undergraduate students. *Social Sciences & Humanities, 20*(3), 865 – 880.

Parrish, P., & Linder-VanBerschot, J. A. (2009a). *Analysis of survey on culturally based learning preferences*. Retrieved March 19, 2017 from https://web.archive.org/web/20120228005851/http:/homes.comet.ucar.edu/~pparrish/papers/Analysis%20of%20Survey%20on%20Culturally%20Based%20Learning%20Preferences.doc

Parrish, P., & Linder-VanBerschot, J. A. (2009b). *Survey on culturally based learning preferences*. [Questionnaire] Retrieved March 19, 2017 from https://web.archive.org/web/20120228005851/http:/homes.comet.ucar.edu/~pparrish/papers/Survey%20on%20Culturally%20Based%20Learning%20Preferences_final.doc

Parrish, P., & Linder-VanBerschot, J. A. (2010). Cultural dimensions of learning: Addressing

the challenges of multicultural instruction. *International Review of Research in Open and Distance Learning, 11*(2), 1–19.

Piaget, J. (1954). *The Construction of Reality in the Child*. New York: Basic Books.

Pishghadam, R., & Naji Meidani, E. (2011). Culture and education: bringing to the light the views of Iranian students of English, French, and Arabic majors towards learning and teaching. *International Journal of Interdisciplinary Research, 2*, 21-34.

Pishghadam, R., & Navari, S., (2010). Examining Iranian language learners' perceptions of language education in formal and informal contexts: a quantitative study. *The Modern Journal of Applied Linguistics, 2*(1), 171-185.

Pishghadam, R., & Pourali, S. (2011a). Iranian PhD students' beliefs about language learning and teaching: a qualitative study. World *Journal of Education, 1*(1), 63-71.

Pishghadam, R., & Pourali, S. (2011b). Metaphorical Analysis of Iranian MA University Students' Beliefs: A Qualitative Study. *Higher Education Studies, 1*(1), 27-37.

Reid, J. (1992). *The effects of cooperative learning with intergroup competition on the math achievement of seventh grade students*. (ERIC Document Reproduction Service No. ED355106.)

Siegel, D. (1999). *The developing mind: how relationships and the brain interact to shape who we are.* New York: Guilford Press.

Slavin, R. E. (1995). *Cooperative learning: theory, research, and practice* (2nd ed.). Boston, Mass.: Allyn & Bacon.

Slavin, R.E. (2011). Instruction based on cooperative learning. In R. Mayer (Ed.), *Handbook of research on learning and instruction*. London: Taylor & Francis.

Valdés, G. (1996). *Con respeto*. New York: Teachers College Press.

Webb, J. (2002). *Benefits of cooperative learning in a multimedia environment*. M.A. Thesis. B.S, Southern Illinois University. ERIC: (ED477457).

Zarei, A. (2012). The effects of STAD and CIRC on L2 reading comprehension and vocabulary learning. *Frontiers of Language and Teaching*, *3*, 161-173.

Zhang, Y. (2015). Chinese Students' Perceptions of Cooperative Learning in Finland. Unpublished Master Thesis. University of Jyväskylä: Finland. Retrieved March 19, 2017 from https://jyx.jyu.fi/dspace/bitstream/handle/123456789/45909/URN%3ANBN%3Afi%3Ajyu-201505161867.pdf?sequence=1

APPENDIX

Factor Analysis Results on CDLF Questionnaire

KMO Measure of Sampling Adequacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.609
Bartlett's Test of Sphericity	Approx. Chi-Square	184.484
	Df	28
	Sig.	.000

Factor Analysis; Item Total Variances

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumula-tive %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumula-tive %
1	2.232	27.904	27.904	2.232	27.904	27.904	2.130	26.627	26.627
2	1.571	19.633	47.537	1.571	19.633	47.537	1.520	19.000	45.627
3	1.181	14.760	62.297	1.181	14.760	62.297	1.334	16.670	62.297
4	0.935	11.684	73.981						
5	0.700	8.752	82.733						
6	0.550	6.876	89.609						
7	0.434	5.420	95.029						
8	0.398	4.971	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Martix; Varimax Rotation Method

	Component		
	1	2	3
Equality/Authority	0.773	-0.013	0.127
Individualism/Collectivism	0.790	0.160	-0.015
Nurture/Challenge	0.796	-0.024	0.085
Stability seeking/Uncertainty acceptance	0.278	-0.021	0.753
Logical argumentation/Being reasonable	0.222	-0.079	0.798
Causality/Complex system	0-.058	0.210	0.813
Clock time/Event time	0-.375	0.692	0.039
Linear time/Cyclical time	0.072	0.630	0.102

Distribution of Mean Survey of Participants' Answers to each Dimension

Equality ⟷ Authority   Individualism ⟷ Collectivism

Nurture ⟷ Challenge   Stability Seeking ⟷ Uncertainty acceptance

Logical ⟷ Reasonable

Focus on ⟷ Focus on
Causality systems and situations

Clock focus ⟷ Event focus

Linear time ⟷ Cyclical time
oriented oriented
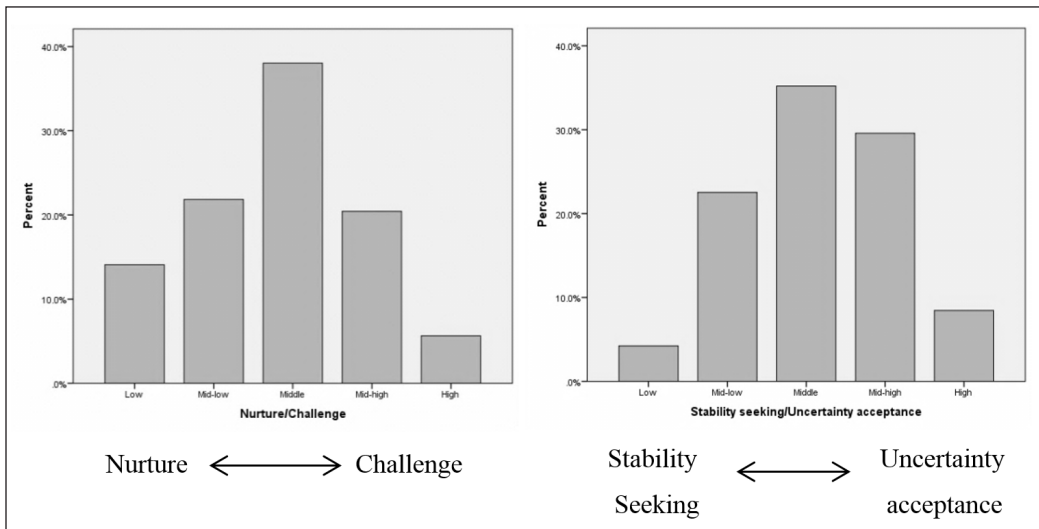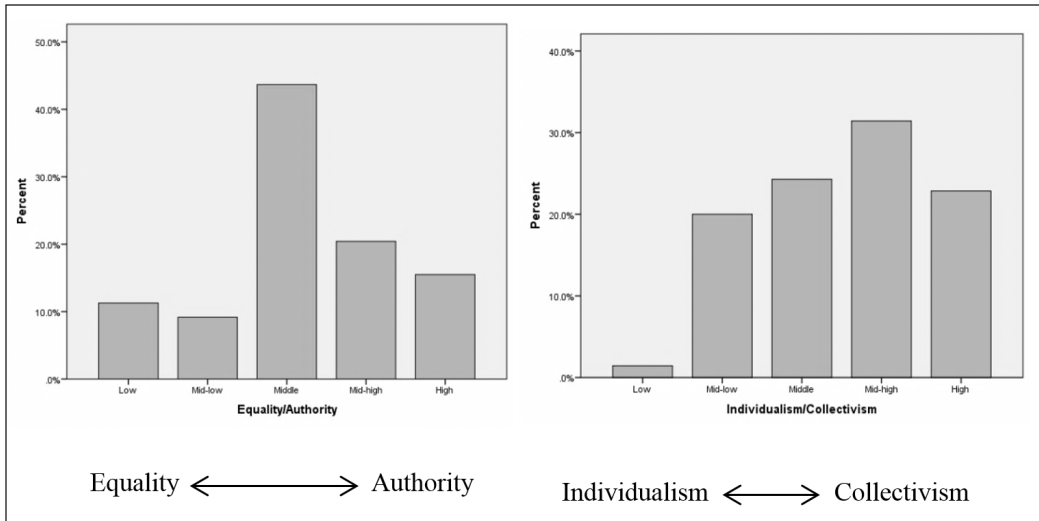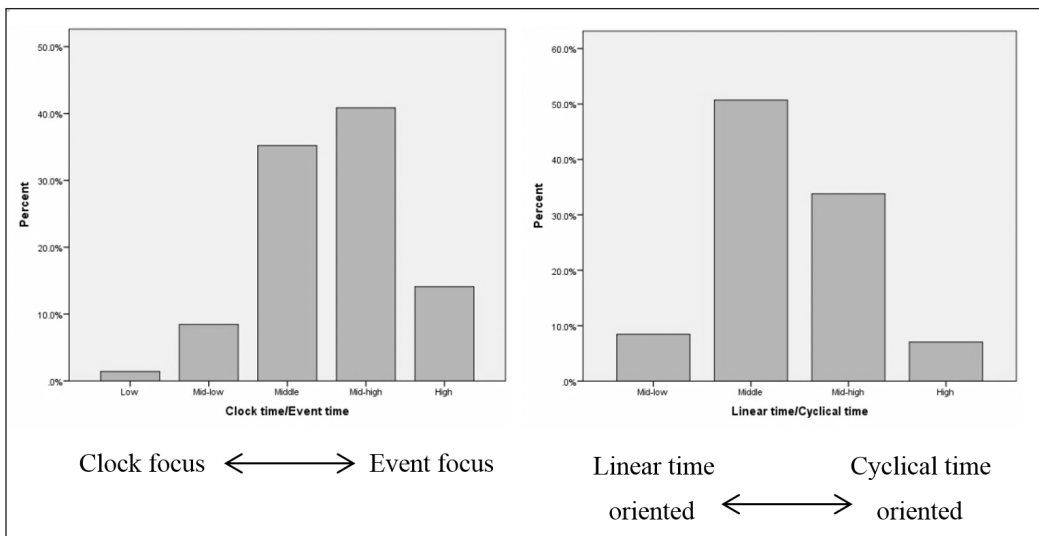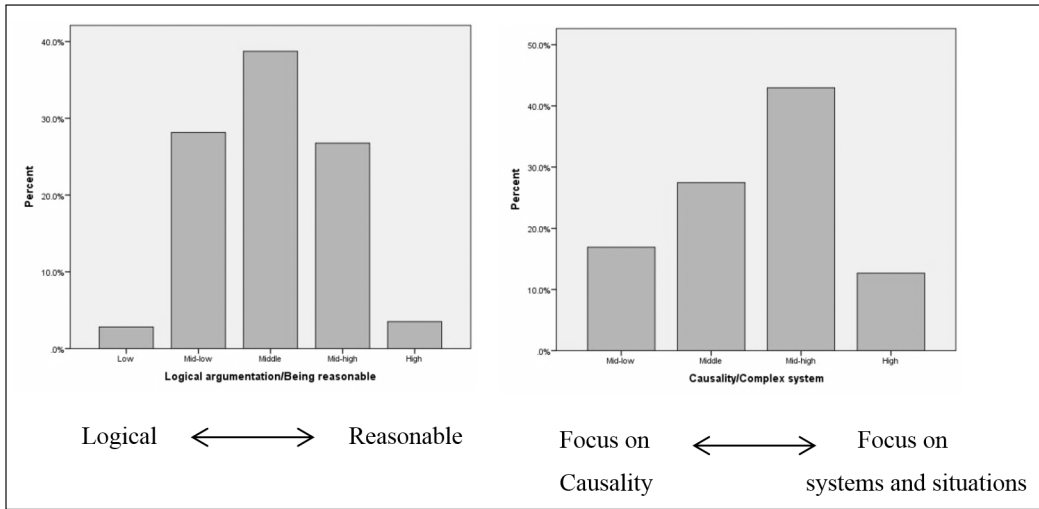
The Influence of SMEs Employees' Intention towards Innovative Behaviour

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ABSTRACT

Small and Medium-Sized Entrepreneurs (SMEs) need to be prepared for external challenges that are mostly beyond their control. SMEs need to improve their internal strength in terms of improving work processes. This, however, can only be effective if employees are innovatively improving their work. This study aims to look at the role of the employee's intention to engage in innovative behaviour based on the Theory of Planned Behaviour (TPB). The research employs the predictors of attitude, subjective norm and perceived behavioural control to affect employee's intention to engage in innovative behaviour. This study also investigates the relationship between intention and engagement in innovative behaviour. A sample of 201 SME employees working in Electrical and Electronic (E & E) SMEs in Malaysia took part in the survey assessment. The results indicate that the three antecedents of attitude, subjective norm and perceived behavioural control affect employee's intention and innovative behaviour. This study provides an understanding of employee intention and innovative behavior that serves as guidance for managers of SMEs and researchers to enhance and capitalise on the capacity of innovative employees.

Keywords: Entrepreneurs, innovative behaviour, intention, SMEs, Theory of Planned Behaviour

INTRODUCTION

With globalisation has come the need for organisations throughout the world to deal with the challenges of drastic change in technology and market liberalisation. The Malaysian economy has also been affected by the rapid changes in business operations globally. Thus, organisations in Malaysia must have a suitable business strategy to

compete effectively in global markets. To be more prepared for the external challenges, which were mostly beyond the control of SMEs, SMEs could capitalise on improving their internal strength in terms of improving work processes. This could be accomplished if employees were productive and fully utilising their skills. If employees were innovatively improving their work by trying out new techniques, methods or processes of doing their job, the effort would translate to improvement of the overall work process of the organisation (Scott & Bruce, 1994).

The innovation process is broadly applied in various situations rather than in product innovation alone. Previously, innovation was only related to large firm as they had the capacity to produce innovative products. Schumpeter (1934) has drawn attention to the fact that large firms generate innovative activity. This form of innovation includes new production, new markets and new organisations (Schumpeter, 1934). Thereafter, entrepreneurs have also come to be seen as innovators as small firms have been found to be more innovative in the context of employment (Acs & Audretchs, 1990). However, the level of innovation at these firms is varied according to industry.

Typically, the organisation's entire innovation is related to innovative production and the process of research and development (R&D) for product improvement (Sundbo, Orfila-Sintes, & Sørensen, 2007) and application of new technological processes for the firm's operation (Chen, Lin, Lin, & McDonough, 2012). Nowadays, innovation is not only related to the production of ideas but also to the implementation of ideas (Vinarski-Peretz et al., 2011). Therefore, innovation also comprises the process of producing creative ideas and implementation of ideas. This process involves the capacity of employees as humans to produce ideas and then to implement them. Individual innovative behaviour completes the process of innovation, which relates not only to firms both large and small but also to individuals.

One important issue for Malaysian SMEs is to increase their productivity and performance as skilled employees are one of the key factors contributing to a firm's effectiveness and competitiveness (Xerri, 2013). Innovativeness could be one of the skills that employees need. Individual innovative behaviour is described as the accumulation of knowledge, experience and skills (Marcati, Guido, & Peluso, 2008). In addition, innovative behaviour also refers to the intentional establishment or the usage of original ideas, procedures and products within a person's work task or groups (West & Farr, 1989).

Academics and researchers have asserted that employees had the potential to build and cultivate innovation at the personal level, which in turn drives organisational performance and competitive advantage (Reuvers et al., 2008; Stock, 2015; Xerri, 2013; Yuan

et al., 2013). According to McClelland (1961), small entrepreneurs became the driving force for the growth of the national economy. These entrepreneurs have a strong need for achievement and are willing to improve themselves. With such personal qualities, entrepreneurs display the motivation to become innovative (McClelland, 1961). Padilha and Gomes (2016) pointed out the features in organisational culture stimulates innovation. They include the capacity of the employee as a driving force to cultivate an innovative culture in the organisation (Robbins & Coulter, 2016).

Individual innovative behaviour acts as a foundation for high organisational performance and the application of innovative behavior, which is aimed at improving a firm's performance and productivity (Carmeli, Meitar, & Weisberg, 2006). Firms cannot remain static in creating products and services in a similar way without any improvement and continue within a similar standard of employee behaviour (Kheng, June, & Mahmood, 2013). This kind of situation can likely lead to decline in a firm's productivity. According to Pieterse and Knippenberg (2010), employees who were engaged in innovative behaviour could stimulate organisational effectiveness and productivity. Employees who are innovative also contribute to a firm's improvement in terms of economic perspective by increasing the firm's productivity and sales (Knol & Linge, 2008).

Previous studies have revealed that the innovation level of Malaysian companies is still at lower levels compared with countries with a high income (Zakaria, Abdullah & Yusoff, 2016). Most previous studies on innovation were conducted at the organisational level such as that of Aziz and Samad (2016); Hilmi and Ramayah (2008); Zakaria et al. (2016) and notwithstanding the importance of innovation at the organisational level, the need to address more research at the individual level in the Malaysian context has been pointed out in the literature (Hakimian et al., 2015; Othman; 2015; Zakaria et al., 2016).

SMEs have been noted to have a responsibility towards improving the nation's economy and employment rates, as well as towards making social improvements (Harvie & Lee, 2002a, 2002b). SMEs often rely on innovative processes (e.g. cost leadership strategy) and products (e.g. product differentiation strategy) to survive and compete in global markets (June & Mahmood, 2011). However, little is known about the role played by employees in innovative work engagement and whether it contributes to SMEs' innovative performance. Thus, employees' capacity to produce innovative products and services might determine an SME's success such as the increase of the firm's productivity and performance.

This paper also aimed to understand the role of the Theory of Planned Behaviour (TPB) in explaining employee intention to engage in innovative behaviour and also the relationship between intention and actual innovative behaviour. As we can see, the successful performance of an organisation is much more dependent on the skill of its workers and behaviour as its productivity depends on them (June & Mahmood, 2011; Zin, Ahmad, Ngah, Ismail, Ibrahim, & Abdullah, 2012). With this in mind, understanding the innovative behaviour of SME employees who provide new ideas and solutions in their tasks is important as this potentially translates to innovative performance for the firm. As such, this study looked into the role of employees as the innovation driver in helping SMEs to improve their business performance.

Hypothesis Development

Innovative Behaviour. Founded by West and Farr (1989), innovative behaviour is described as the planned establishment or the usage of novel ideas, processes and products within an individual's work role or organisation. The definition of innovative behaviour provided by West and Farr (1989) has been widely adopted by innovative behaviour researchers (Janssen, 2000; Scott & Bruce, 1994; Shih & Susanto, 2011; Yuan et al., 2010). Scott and Bruce (1994), on their part, defined and broadened the concept of individual innovative behaviour.

Scott and Bruce (1994) explained the model of individual innovative behavior, which consisted of the process in three stages. Firstly, the innovative process began with the recognition of problems and production of ideas. At the second stage, the seeker of the idea would look for sponsorship and would attempt to create alliance of followers for the ideas to be implemented. Finally, the idea was produced into a prototype or sample by an individual. Thus, innovative behaviour covered actions of finding new ideas, producing the ideas at work and planning for idea implementation. The measurement scale of innovative behaviour provided by Scott and Bruce (1994) has been adopted and applied by most innovative behaviour studies (Carmeli & Spreitzer, 2009; Vinarski-Peretz et al., 2011; Xerri & Brunetto, 2011; Yuan et al., 2010). According to Carmeli and Spreitzer (2009) innovative behaviour requires more risk during the implementation of ideas and also needs a person to think out of the box.

Theory of Planned Behaviour (TPB). The Theory of Planned Behaviour (TPB) was introduced by Ajzen and Fishbein (1977). This theory consists of three dimensions, which are attitude, subjective norm and perceived behavioural control. TPB has been extensively used by researchers to predict human intention to take on a particular behaviour and has the capability to explain actual behavior through the individual's intention (Verbeke & Vackier, 2005). This theory is well known to predict social behaviour and explain individual intention to action (Lu & Luh, 2013). Lu and Luh (2013) tested the intention of students to engage in creative behaviour using TPB,

while Ajzen (2002) found in a study that the more favourable the attitude, subjective norm and perceived behavioural control of a person, the higher the intention to execute the action. As such, when a person is given sufficient leeway to plan and control their behaviour, they are expected to demonstrate higher intention for innovative behavior (Wang & Ritchie, 2012).

Attitude. This is viewed as the evaluative predisposition that affects the individual's behaviour (Petty, 2006). Attitude may also be described as the association that exists either in a single, positive or negative or rejected or accepted association (Nepomuceno & Porto, 2010). According to Ajzen and Fishbein (1977), attitude towards a particular behaviour is the outcome of a person's belief that relates to their acted out behaviour (Aghamolaei, 2012). As such, the outcome of attitudes would be the actual behaviour of a person (Ajzen, 2002; Rogelberg, Fisher, Maynard, Hakel, & Horvath, 2001). Ajzen (2002) stated that attitude is related to the evaluation of the overall performance of a person's behaviour. For example, if a person believes that his or her action would bring a positive outcome, he or she would likely have a positive attitude towards the intended behaviour. Similarly, a person who perceives negative outcomes will act from a negative attitude. Moreover, individuals who have a positive evaluation of a behaviour would possess positive attitudes towards a particular behavior (Blankenship, Wegener, & Murray,

2012). Thus, the first hypothesis was developed as below:

> H1 Attitude towards innovative behaviour is positively related to intention to engage in innovative behaviour.

Subjective Norm. Subjective norm refers to the individual's perception of how they should or should not perform a behaviour based on other people's thinking (Ajzen & Fishbein, 1977). These people consist of family members, colleagues or supervisors who are perceived to be important and have influence over the person. As such, the individual who acts upon a particular behaviour believes that he or she is confirming someone else's expectation, which also reduces social pressure (Greaves et al., 2013). Subjective norm may also be referred to as the perceived social pressure by an individual who perceives that people who are important to him or her think that he or she should or should not perform the behaviour (Ajzen & Fishbein, 1980). The pressure to behave stems from the individual's belief that his or her performance of behaviour will receive approval or disapproval from society (Abzari, 2011). Thus, a person's action or behaviour is determined or influenced by the pressure from others. Such pressures stems from family members, colleagues and managers within the organisational setting. Therefore, the second hypothesis was developed as follows:

H2 Subjective norm is positively related to intention to engage in innovative behaviour.

Perceived Behavioural Control. This refers to an employee's perception of having control over a particular behaviour (Ajzen, 2011). The individual perceives how much effort is needed to perform the intended behaviour (Greaves et al., 2013). Therefore, the perceived behavioural control would influence the employee's intention to engage in a particular behaviour in the future. Perceived behavioural control is also dependent on the individual's perception of how easy or difficult the behavior will be. An individual who believes that he or she has adequate control over his or her behaviour tends to perform the intended behaviour successfully (Ajzen & Fishbein, 1977). Besides that, perceived behaviour control can also influence the intention and actual behaviour of the individual as he or she believes the behaviour is under his or her control or not (Ferdous, 2010). Based on this argument, the third hypothesis is:

H3 Perceived behavioural control is positively related to the intention to engage in innovative behaviour.

Intention. The individual's intention to perform a behaviour is recognised as an immediate and important factor in predicting the actual behaviour in the future (de Bruin et al., 2012). Ajzen (2002) stated that intention was a representative of the individual's expectation towards a particular behaviour, where intention would

result in the behaviour's outcome. Intention determines the effort of an individual who is willing to try to perform a behavior and therefore plans how to carry it out (Conner & Armitage, 1998). Gollwitzer (2009) highlighted that intention includes the actual realisation and mental representation of the individual. Moreover, a person's intention to perform a behaviour is determined by his or her personal and social interests (Markus & Street, 2009). Accordingly, the more favourable his or her attitude and subjective and perceived behavioural control, the greater the individual's intention to undertake the behavior (Wang & Ritchie, 2012). In summary, previous studies reported that intention was discovered to be a reliable predictor of actual behaviour (Brandon & Lewis, 1999; Egmond, Jonkers, & Kok, 2005; Greaves, Zibarras, & Stride, 2013). So far, all innovative behaviour (IB) models studied predictors to innovative behaviour without measuring "intention of innovative behaviour" (Carmeli & Spreitzer, 2009; Vinarski-Peretz et al., 2011; Yuan et al., 2010). It is important to have intention in a framework if referring to the TPB because some predictors might influence intention but not behaviour, and intention does not always translate to behaviour (Verbeke & Vackier, 2005). Measuring intention to engage in innovative behaviour is important because intention leads the individual to have strong motivation to undertake the behaviour (Norman & Hoyle, 2004). This allows us to understand better the process of the individual engagement with innovative behaviour. For that reason, this study

helps to close the gap in the literature by understanding the employee's innovative behaviour using the TPB as a theoretical basis. Hence, the fourth hypothesis is:

H4 There is a positive relationship between intention and innovative behaviour.

Based on the above arguments and suggested hypotheses, the framework of this study was depicted as shown in Figure 1:
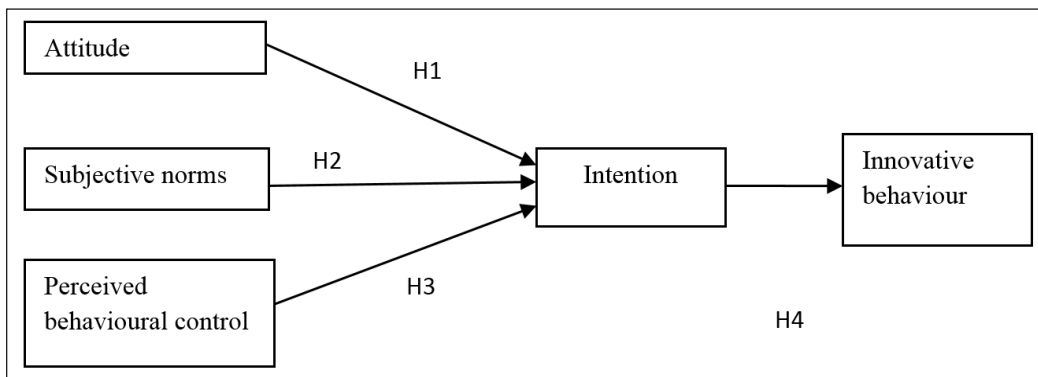
Figure 1. Conceptual framework

METHODS

This study employed the primary data collection method via survey questionnaires. Malaysian SMEs were selected as the sample for this study because of their importance in Malaysian economic growth. The definition of SMEs was adopted from SME Corporation, which categorised SMEs according to the quantity of workers (not exceeding 200 workers) and yearly sales turnover (not exceeding RM50 million). In terms of industry, the SMEs were from the electrical and electronic (E & E) industry. This is because the electrical and electronic industry has expanded and become one of the main contributors to the growth of Malaysian gross domestic product (GDP) (Tuah, 2016). This has been deemed a promising industry

for the Malaysian economy. The demand for local and imported electrical and electronic products and services is ever increasing pointing to a bright future for the electrical and electronic sector in Malaysia. Thus, the electrical and electronic sector pertaining to SMEs was considered the sample frame for this study because these organisations would most likely need to be innovative to compete with international competitors. The list of electrical and electronic SMEs was obtained from the Malaysian External Trade Development Corporation (MATRADE). The unit of analysis used in this study was based on individual employees working in E & E SMEs around Malaysia. The questionnaires were distributed randomly among employees of these SMEs.

The questionnaires were written in English and translated into Malay to facilitate understanding among the respondents in order to obtain accurate responses. The seven items for attitude towards innovative behaviour practices was adapted from Ajzen (2001). The respondents were asked about their opinion and feelings towards innovative behaviour practices, whether they looked for new technology, processes, techniques, and/or product ideas (taken from Yuan and Woodman (2010)'s innovative behaviour scale with the highest factor loading), using a semantic differential scale. Each of the bipolar scales was measured in range whereby 1 was the negative end of the scale and 5 the positive. A high attitude score indicated that the respondent had a more positive attitude towards innovative behavior, while a lower attitude score indicated that the respondent had a more negative attitude towards innovative behaviour.

The three items to measure subjective norm of employees were adapted from Ajzen (2001) and Wang and Ritchie (2012)'s studies. The items were rephrased to match the current study of innovative behaviour. The respondents were asked about their opinion and feeling of support or pressure from others towards innovative behavior; a 5-point Likert scale was used as the measure. The scale ranged from 1 ("extremely unlikely") to 5 ("extremely likely"). A higher subjective norm score indicated that the respondent felt much social pressure to engage in innovative behaviour. A lower subjective norm score indicated that the respondent felt less social pressure to perform innovative behaviour.

The three items for perceived behavioural control were adapted from Ajzen (2001). The items were rephrased to match the context of innovative behaviour. Thus, the respondents were asked about how they perceived their ability to control their behaviour towards innovativeness. Each item was rated based on a 5-point Likert scale which ranged from 1 ("strongly disagree") to 5 ("strongly agree"). A higher perceived behavioural control score signified that the respondent had more control of innovative behaviour and a lower perceived behavioural control score indicated that the respondent had less control of innovative behaviour.

The items of intention in Ajzen (2001)'s studies were adapted to measure intention to engage in innovative behaviour. The three items were rephrased to match the context of innovative behaviour. Those items of intention were developed based on the theory of planned behaviour and were adapted to measure intention to undertake innovative (search for new technology, processes, techniques and/or product ideas and implement them to improve my work) activities in the respondent's daily work. The three items were rated on a five-point Likert scale from 1 or "strongly disagree" to 5 "strongly agree." Lastly, the variable of innovative behaviour was measured using a six-item scale adopted from Scott and Bruce (1994) and Yuan and Woodman (2010). The participants were asked about characteristics of innovative behaviour rated on a response scale from 1 ("not like me at all") to 5 ("very much like me").

The data obtained was then analysed using the PLS-SEM in order to get a structural model that could be used to test all the hypotheses. PLS-SEM was used in this study as it helped the researcher to maximise the explained variance of the endogenous latent construct (Hair et al., 2014). In this study, constructs were measured using multiple items. All the constructs used reflective measurement as the items were reflective of the constructs and dropping items would not change the meaning of the construct (Hair et al., 2014).

RESULTS

A total of 382 questionnaires were distributed to E & E SMEs in Malaysia, with 201 completed questionnaires collected for data analysis, representing a 52.6% response rate. The characteristics of the respondents are indicated in Table 1. Respondents' profiles showed that the employees who participated in the study were working in various departments of electrical and electronic SMEs.

The majority of respondents were in the 30-40-year-old age group. The

Table 1
Profile of respondents

		Frequency	Percentage
Occupation	Engineer	127	63.2
	Marketing Officer	25	12.4
	HR Officer	21	10.4
	Finance/Accountant	28	13.9
Years of Working Experience	<1	24	11.9
	1-5	68	33.8
	6-10	63	31.3
	>10	46	22.9
Position	Non-executive	8	4.0
	Junior Executive	79	39.3
	Senior Executive	82	40.8
	Manager	28	13.9
	Senior Manager	4	2.0
Age	<30	73	36.3
	31-40	89	44.3
	>41	39	19.4
Gender	Male	130	64.7
	Female	71	35.3
Race	Malay	127	63.2
	Chinese	58	28.9
	Indian	15	7.5
	Others	1	0.5
	Total	201	100.0

second largest group was of those below 30 years of age. The smallest age group was the above-41 years-of-age group, which consisted of 19.4% of the respondents. In terms of gender, male respondents represented 65% of the total, while females represented 35%. As for race, the largest group of respondents were Malays, who consisted of 63.2% of the total number respondents, followed by the Chinese (28.9%) and then the Indians (7.5%). The smallest group was 'Others' such as the Iban, who made up 0.5% or one respondent from the sample. The respondents of this survey consisted of knowledge workers. The majority of the respondents were engineers. This represented 63% or 127 respondents of the sample. The remaining participants were marketing officers (12.4%), human resource officers (10.4%) and finance officers and accountants (13.9%). As for job tenure, 11.9% of the respondents had working experience of less than one year, 33.8% had working experience from one to five years, 31.3% had working experience from six to 10 years and 22.9% respondents had more than 10 years' working experience. In terms of position, the majority of the respondents, consisting of 40.8% of the respondents, held senior executive positions. The second highest group of respondents was made up of junior executives. This group numbered 79 or 39.3% of the respondents. The third highest group held managerial positions (13.9%), while the smallest group was made up of non-executives (4%) and senior managers (2%).

The structural model of path coefficient using PLS-SEM was used to test all direct relationships. Reflective measurement analysis was conducted to assess consistency reliability, convergent validity and discriminant validity of the items. The measurement model of this study is presented in Table 2. The composite reliability (CR) with higher value determines the internal consistency reliability. Indicators with outer loading value greater than 0.60 were retained, while those with values less than 0.40 were removed automatically. Lastly, the discriminant validity was determined by the square root of average variance extracted (AVE), which needed to be greater than 0.50. The results revealed that the value of the AVE for retained constructs was greater than 0.50.

The analysis of the structural model was used to test if the underlying theory or concept of the path model proposed in the earlier stage of this study was supported by data. The assessment of the structural model was based on five steps as proposed by Hair et al. (2014).

Firstly, a collinearity assessment was conducted in order to eliminate similar constructs. Table 2 showed the collinearity test. All VIF values of each predictor to the constructs were less than five. This indicated that multicollinearity did not exist as only values above five were considered as having collinearity issues.

Secondly, the results of the path coefficient assessment were obtained and are shown in Table 3. The results signified the

Table 2
Reflective Measurement Model: Factor loadings, Composite Reliability (CR) and Average Variance Extracted (AVE)

Construct	Indicators	Loadings	AVE	CR
1. Attitude	ATT1	0.794	0.514	0.84
	ATT2	0.793		
	ATT3		Item deleted	
	ATT4	0.658		
	ATT5	0.647		
	ATT6	0.679		
	ATT7		Item deleted	
15. Subjective Norm	SN1	0.859	0.610	0.756
	SN2	0.695		
	SN3		Item deleted	
12. Perceived Behavioural Control	PBC1		0.699	0.822
		0.900		
	PBC2		Item deleted	
	PBC3	0.767		
4. Intention	INT1	0.776	0.585	0.809
	INT2	0.738		
	INT3	0.781		
3. Innovative Behaviour	INNOBEH1	0.870	0.670	0.910
	INNOBEH2	0.869		
	INNOBEH3	0.809		
	INNOBEH4		Item deleted	
	INNOBEH5	0.756		
	INNOBEH6	0.783		
Total Items				22

Table 3
Collinearity assessment

	Innovative Behaviour	Intention
Attitude		1.13
Innovative Behaviour		
Intention	1.40	
Perceived Behavioural Control		1.21
Subjective Norm		1.17

Note: VIF <5

significance of the path coefficients between each construct that were tested based on the hypotheses developed earlier. According to the assessment of path coefficients in Table 3, H1, H2, H3 and H4 were found to have results of t-value >1.725 at the value of 0.05 level of significance. Based on these findings, all the hypotheses proposed earlier had been accepted as the results

showed a positive relationship between all the variables. Looking at the construct of intention, perceived behavioural control was the most important predictor (0.439), followed by subjective norm (0.210) and attitude (0.182), while the relationship between intention and innovative behaviour showed a moderate strength of 0.476.

Table 4
Path Coefficient Assessment (N=201)

Hypothesis	Relationship	Path Coefficient	Standard Error	T-values (One-tailed)	p Values	Result
H1	Attitude > Intention	0.182	0.062	2.940	0.003	Significant
H2	Subjective Norm > Intention	0.210	0.073	2.887	0.004	Significant
H3	Perceived Behavioural Control > Intention	0.439	0.069	6.367	0.000	Significant
H4	Intention > Innovative Behaviour	0.476	0.080	5.961	0.000	Significant

Thirdly, coefficient determination (R^2) was used to evaluate the structural model. R^2 values ranged from 0 to 1 on the principle that the closer the value is to 1, the higher the level of predictive accuracy. R^2 value of 0.401 for intention indicated that attitudes, subjective norm and perceived behavioural control represented 40.1%

of the variance for intention, as shown in Table 4. In the same way, the R^2 value of 0.297 for innovative behaviour showed that intention accounted for 29.7% of the variance in innovative behaviour. Based on the explanatory power of R^2 provided by Cohen (1988), an R^2 scored greater than 0.26 is considered substantial.

Table 5
Co-Efficient of Determination (R^2 value)

Construct	Co-efficient of Determination R^2	Explanatory Power
Innovative Behaviour	0.297	Substantial
Intention	0.401	Substantial

Note: R^2 score interpretation (0.26 substantial, 0.13 moderate, 0.02 weak) (Cohen, 1989)

Fourthly, effect size was used to evaluate whether exogenous constructs had substantive impact on endogenous constructs. Only perceived behavioural control had a medium effect size compared with attitude and subjective norm, which had a small effect size. According to Hair et al. (2009) and Sullivan and Feinn (2012), it was difficult to produce a high f^2 effect size due to the complexity of the model and conditions of research area.

Table 6
f^2 Effect Size

	Innovative Behaviour	Intention
Attitude		0.049
Innovative Behaviour		
Intention	0.100	
Perceived Behavioural Control		0.267
Subjective Norm		0.063

Note: f^2 Score Interpretation (0.35 large effect size, 0.15 medium effect size, <0.02 trivial effect size)

The last step as mentioned by Hair et al. (2014) was related to predictive relevance Q^2 assessment. The predictive relevance Q^2 (Geisser, 1975; Stone, 1974) was used to examine whether exogenous constructs had predictive power over endogenous constructs. The blindfolding procedure was used to obtain cross-validated redundancy measures for every endogenous construct. It was a resampling technique that systematically deleted and predicted the indicator's point in the reflective measurement model. A value of Q^2 that was larger than 0 showed that the exogenous constructs had predictive application on the endogenous constructs (Hair et. al., 2014). Table 6 showed that all the endogenous constructs of intention and innovative behaviour had Q^2 value > 0. This indicated that the model had appropriate predictive relevance.

Table 7
Assessment of predictive relevance Q^2

Construct	Predictive Relevance Q^2
Innovative Behaviour	0.146
Intention	0.216

Note: $Q^2 > 0$

Based on the evaluation of structural path analysis using PLS-SEM (Hair et al., 2009), a summary of the hypothesis results for this study is presented in Table 8.

The supported results for H1, H2 and H3 indicated that these empirical findings were consistent with those of previous studies in the literature on innovative behaviour practices. This also supported the TPB, which described that attitudes, subjective norm and perceived behavioural control were predictors of intention. Apart from that, H4, which indicated the relationship between intention and innovative behavior, was also supported.

Table 8
Summary of hypotheses results

Hypothesis	Hypothesis Statement	Result
H1	Attitude towards innovative behaviour is positively related to intention to engage in innovative behaviour.	Supported
H2	Subjective norm is positively related to intention to engage in innovative behaviour.	Supported
H3	Perceived behavioural control is positively related to intention to engage in innovative behaviour.	Supported
H4	There is a positive relationship between intention and innovative behaviour.	Supported

DISCUSSION

The research findings showed the association between components of TPB (attitude, subjective norm and perceived behavioural control) and intention that worked as a platform to explain the employee's innovative behaviour. The findings of this study supported the previous study by Ajzen (2001) that stated that attitude influences the intention of the individual to perform a specific behaviour. This study further enhances research into this area by examining it in the context of innovative behavior. The findings confirmed that attitude influences the intention of an employee to engage in innovative behaviour. The findings of the current study also support the TPB model by Ajzen (2001) that showed the association between subjective norm and intention. In addition, this study is aligned with the result of Yuan and Woodman (2012)'s study, which showed that social norm influenced the individual reaction to innovative work behaviour. The results also found a positive relationship between intention and innovative behaviour in the context of SME employees. This was in line with the previous study by

Gollwitzer et al. (2009), who stated that intention was related to the attainment of the performance of a specific behaviour. Thus, a positive attitude, social norms and perceived behavioural control were validated in this study as important elements of an employee's intention to engage in innovative behaviour. Therefore, the findings of this study extended the applicability of TPB in the context of innovative behaviour.

Innovative behaviour was related to human competence and created opportunities as well as benefitted the individual and organisation at large (Skerlavaj et al., 2010). On their part, Scott and Bruce (1994) stated that innovation generated the production of ideas, processes, products or solutions in an organisation. Cultivating innovative behaviour among employees could help a firm gain market competitiveness, performance and productivity (Carmeli et al., 2006; Xerri, 2013; Yuan et al., 2010). Understanding the factors contributing to organisational success was the focal point area of the current study. The success of the organisation was much dependent on the employee's capacity to work and behave accordingly. Responses from the employees

participating in the current study suggested that innovative behaviour of the employee was driven by the employee's attitude, subjective norm and perceived behavioural control. Thus, electrical and electronic SMEs might wish to identify potential employees through individual assessment based on the innovativeness of the individual. This study also showed that social support is important in encouraging workers to engage in innovative behaviour. The workers needed support from their leaders, colleagues and also the organisation at large. Thus, managers need to encourage innovative behaviour by setting appropriate surroundings and expectations for employees. The findings of this study were useful for electrical and electronic SMEs to utilise the capacity of innovative employees. Having workers who possess the required skills will help the E & E SMEs to expand their business as skilled workers will contribute to increasing a firm's productivity.

CONCLUSION

Research on SME employees' innovative behaviour in Malaysia is still at the infancy stage. There are broad opportunities for further research in this context. This study provides a platform for future studies interested to delve further into this topic either in Malaysia or other contexts. This study offers a theoretical contribution by adding an insight into understanding employees' innovative behaviour through the Theory of Planned Behaviour (TPB). Thus, this study provided insights into understanding the antecedents of the TPB

that explained the employee's intention to engage in innovative behaviour. As recommended by various scholars such as Carmeli and Spreitzer (2009); Scott and Bruce (1994); Xerri and Brunetto (2011), and Yuan and Woodman (2010) being innovative is one of the more important aspects for ensuring the long-term success of the organisation. Employees play crucial roles in enhancing the innovative capacity of an organisation. As a result, this study illustrated the theoretical aspects of using the TPB in the context of innovative behaviour and also demonstrated the empirical evidence to support the literature on Malaysian SMEs.

REFERENCES

Abdullah, N. L., Jamaludin, K. R., & Hayati, H. A. T. (2014). Pretesting impact of operational complexity in Malaysia's electrical and electronics manufacturing industry. *Jurnal Teknologi (Sciences & Engineering), 67*(3), 43–50.

Abzari, M., & Abbasi, R. (2011). Investigating impact of organizational climate on intention to knowledge sharing behavior by using theory of planned behavior (TPB). *Interdisciplinary Journal of Contemporary Research in Business*, *2*, 121–135.

Acs, Z. J., & Audretsch, D. B. (2003). Introduction to the handbook of entrepreneurship research. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 3–20). Dordrecht: Kluwer.

Acs, Z. J., & Audretsch, D. B. (1990). *Innovation and small firms,* Cambridge, MA: MIT Press.

Aghamolaei, T., Tavafian, S. S., & Madani, A. (2012). Fish consumption in a sample of people in

Bandar Abbas, Iran: Application of the theory of planned behavior. *Archive of Iranian Medicine, 15*, 545–548.

Ajzen, I. (2001). Nature and operations of attitudes. *Annual Review of Psychology, 52*, 27–58.

Ajzen, I. (2002). Residual effects of past on later behavior: Habituation and reasoned action perspective. *Personality and Social Psychology Review*, *6*(2), 107–122.

Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. *Psychology and Health, 26*(9), 1113–1127.

Ajzen, I., & Fishbein, M. (1977). Attitude-Behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, *84*(5), 888–918.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior.* Englewood Cliffs, NJ: Prentice-Hall.

Aziz, N. N. A., & Samad, S. (2016). Innovation and competitive advantage: Moderating effects of firm age in foods manufacturing SMEs in Malaysia. *Procedia Economics and Finance, 35,* 256–266.

Blankenship, K. L., Wegener, D. T., & Murray, R. A. (2012). Circumventing resistance: Using values to indirectly change attitudes. *Journal of Personality and Social Psychology*, *103*(4), 606–21. doi:10.1037/a0029226.

Brandon, G., & Lewis, A. (1999). Reducing household energy consumption: A qualitative and quantitative field study. *Journal of Environmental Psychology, 19*, 75–85.

Carmeli, A., Meitar, R., & Weisberg, J. (2006). Self-leadership skills and innovative behavior at work. *International Journal of Manpower*, *27*(1), 75–90. doi:10.1108/01437720610652853.

Carmeli, A., & Spreitzer, G. M. (2009). Trust, connectivity, and thriving: Implications for innovative behaviors at work. *The Journal of Creative Behavior*, *43*(3), 169–191. doi:10.1002/j.2162-6057.2009.tb01313.x

Chen, M. Y.-C., Lin, C. Y.-Y., Lin, H.-E., & McDonough, E. F. (2012). Does transformational leadership facilitate technological innovation? The moderating roles of innovative culture and incentive compensation. *Asia Pacific Journal of Management*, *29*(2), 239–264. doi:10.1007/s10490-012-9285-9

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Conner, M., & Armitage, J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Educational and Child Psychology*, 1429–1464.

de Bruin, M., Sheeran, P., Kok, G., Hiemstra, A., Prins, J. M., Hospers, H. J., & van Breukelen, G. J. P. (2012). Self-regulatory processes mediate the intention-behavior relation for adherence and exercise behaviors. *Journal of Health Psychology*, *31*(6), 695–703. doi:10.1037/a0027425.

Egmond C., R. Jonkers, R., & Kok, G. (2005). A strategy to encourage housing associations to invest in energy conservation. *Energy Policy*, *33,* 2374–2384.

Ferdous, A. S. (2010). Applying the theory of planned behavior to explain marketing managers' perspectives on sustainable marketing, *Journal of International Consumer Marketing*, 313–325. doi:10.1080/08961530.2010.505883.

Geisser, S. (1975). The predictive sample reuse method with applications. *Journal of the American Statistical Association*, *70*(350), 320–328.

Greaves, M., Zibarras, L. D., & Stride, C. (2013). Using theory of planned behavior to explore environmental behavioral intentions in

the workplace. *Journal of Environmental Psychology, 34, 109–120.*

Gollwitzer, P. M., Sheeran, P., Michalski, V., & Seifert, A. E. (2009). When intentions go public does social reality widen the intention-behavior gap? *Psychological Science, 20*(5), 612–619.

Hair, J., Bush, R., & Ortinau, D. (2009). *Marketing research.* New York: McGraw-Hills Ltd.

Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Los Angeles: SAGE Publications.

Hakimian, F., Farid, H., Ismail, M. N., & Nair, P. K. (2015). Importance of commitment in encouraging employees' innovative behaviour. *Asia-Pacific Journal of Business Administration, 8*(1), 70–83.

Harvie, C., & Lee, B. C. (2002a). Globalisation and SMEs in East Asia. *Studies of small and medium sized enterprises in East Asia* (pp. 318). Cheltenham, UK.

Harvie, C., & Lee, B. C. (2002b). The role of SMEs in national economies in East Asia. *Studies of small and medium sized enterprises in East Asia* (pp. 404). Cheltenham , UK.

Hilmi, M. F., & Ramayah, T. (2008). Market innovativeness of Malaysian SMEs: Preliminary results from a first wave data collection. *Asian Social Science, 4*(12), 42–49.

Janssen, O. (2000). Job demands, perceptions of effort – Reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology, 73,* 287–302.

June, S., & Mahmood, R. (2011). The relationship between person-job fit and job performance: A study among the employees of the service sector SMEs in Malaysia. *International Journal of Business, Humanities and Technology, 1*(2), 95–105.

Kheng, Y. K., June, S., & Mahmood, R. (2013). The determinants of innovative work behavior in the knowledge intensive business services sector in Malaysia. *International Journal of Business, Humanities and Technology, 9*(15), 47–59.

Knol, J., & Linge, R. V. (2008). Innovative behavior: The effect of structural and psychological empowerment on nurses. *Journal of Advanced Nursing,* 359–370. doi:10.1111/j.1365-2648.2008.04876.x

Lu C. C., & Luh D. B. (2013) Innovative behavioral intention and creativity achievement in design: Test of an integrated model. *International Conference of Design, User Experience and Usability* (pp. 535–544). Berlin: Springer.

Marcati, A., Guido, G., & Peluso, A. M. (2008). The role of SME entrepreneurs' innovativeness and personality in the adoption of innovations. *Research Policy, 37*, 1579–1590.

Markus, M. L., & Street, F. (2009). Issues and opinions why break the habit of a lifetime? Rethinking the roles of intention, habit, and emotion in continuing information technology use. *Management Information System Quarterly*, *33*(3), 433–444.

McClelland, D. C. (1961). *The achieving society.* Princeton, NJ: van Nostrand.

Nepomuceno, M. V., & Porto, J. B. (2010). Human values and attitudes toward bank services in Brazil. *International Journal of Bank Marketing*, *28*(3), 168–192. doi:10.1108/02652321011036459

Norman, P., & Hoyle, S. (2004). The theory of planned behavior and breast self-examination: Distinguishing between perceived control and self-efficacy. *Journal of Applied Social Psychology, 34*, 694–708.

Othman, N. (2016). Exploring the innovative personality characteristics among teachers. *International Education Studies, 9*(4), 1–7.

Padilha, C. K., & Gomes, G. (2016). Innovation culture and performance in innovation of products and processes: A study in companies of textile industry. *Innovation and Management Review, 13,* 285–294.

Petty, R. E. (2006). A metacognitive model of attitudes. *Journal of Consumer Research*, *33*, 22–24.

Pieterse, A. N., & Knippenberg, D. V. A. N. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment transformational and transactional leadership. *Journal of Organizational Behavior*, *31*, 609–623. doi:10.1002/job

Reuvers, M., Engen, M. L. V., Vinkenburg, C. J., & Wilson-Evered, E. (2008). Transformational leadership and innovative work behaviour: Exploring the relevance of gender differences. *Leadership and Innovation, 17*(3), 227–245. doi:10.1111/j.1467-8691.2008.00487.x

Robbins, S. P., & Coulter, M. (2016). *Management*. Essex, England: Pearson.

Rogelberg, S. G., Fisher, G. G., Maynard, D. C., Hakel, M. D., & Horvath, M. (2001). Attitudes toward surveys: Development of a measure and its relationship to respondent behavior. *Organizational Research Methods*, *4*(1), 3–25. doi:10.1177/109442810141001

Schumpeter, J. A. (1934). *The theory of economic development*. Cambridge, MA: Harvard University Press.

Scott, S. G., & Bruce, R. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, *37*(3), 580–607. doi:10.2307/256701.

Shih, H. A., & Susanto, E. (2011). Is innovative behavior really good for the firm? Innovative work behavior, conflict with co-workers and

turnover intention: Moderating roles of perceived distributive fairness. *International Journal of Conflict Management*, *22*(2), 111–130. doi:10.1108/10444061111126666.

Škerlavaj, M., Song, J. H., & Lee, Y. (2010). Organizational learning culture, innovative culture and innovations in South Korean firms. *Expert Systems with Applications*, *37*(9), 6390–6403. doi:10.1016/j.eswa.2010.02.080.

Stock, R. M. (2015). Is boreout a threat to frontline employees' innovative work behavior? *Journal of Productivity Innovation Management, 32,* 574–592. doi:10.1111/jpim.12239

Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. *Journal of Royal Statistical Society*, *36*, 111–147.

Sullivan, G. M., & Feinn, R. (2012). Using effect size – Or why the *P* value is not enough. *Journal of Graduate Medical Education*, *4*(3), 279–282.

Sundbo, J., Orfila-Sintes, F., & Sørensen, F. (2007). The innovative behaviour of tourism firms – Comparative studies of Denmark and Spain. *Research Policy*, *36*(1), 88–106. doi:10.1016/j.respol.2006.08.004

Tang, J., & Pee, L. G. & Iijima, J. (2011). Employee's innovation behavior: The role of external information awareness and proactiveness of innovation strategy. *Proceedings of the International Conference on Knowledge Management and Information Sharing* (pp. 5–17). Berlin: Springer.

Tuah, Y. (2016). E&E – A gateway to Malaysia's trade. *The Borneo Post*. p. 1. Retrieved January 6, 2017, from http://www.theborneopost.com/2016/04/17

Verbeke, W., & Vackier, I. (2005). Individual determinants of fish consumption: Application of the theory of planed behavior. *Appetite*, *44*, 67–82.

Vinarski-Peretz, H., Binyamin, G., & Carmeli, A. (2011). Subjective relational experiences and

employee innovative behaviors in the workplace. *Journal of Vocational Behavior*, *78*(2), 290–304. doi:10.1016/j.jvb.2010.09.005.

Vinarski-Peretz, H., & Carmeli, A. (2011). Linking care felt to engagement in innovative behaviors in the workplace: The mediating role of psychological conditions. *Psychology of Aesthetics, Creativity, and the Arts*, *5*(1), 43–53. doi:10.1037/a0018241.

Wang, J., & Ritchie, B. W. (2012). Understanding accommodation managers' crisis planning intention: An application of the theory of planned behaviour. *Tourism Management*, *33*(5), 1057–1067. doi:10.1016/j.tourman.2011.12.006

West, M. A., & Farr, J. (1989). Innovation among healthcare professionals. *European Journal of Social Psychology*, *4*(3), 173–184.

Xerri, M. (2013). Workplace relationships and the innovative behaviour of nursing employees: A social exchange perspective. *Asia Pacific Journal of Human Resources*, *1*(4), 103–123. doi:10.1111/j.1744-7941.2012.00031.x

Xerri, M. J., & Brunetto, Y. (2011). The impact of the perceived usefulness of workplace social networks upon the innovative behaviour of SME employees: A social capital perspective. *International Journal of Innovation Management, 15*(5), 959–987. doi:10.1142/S1363919611003350

Yuan, F., & Woodman, R. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations performance and image. *Academy of Management Journal, 53*(2), 323–342.

Zakaria, N., Abdullah, N. A. C., & Yusoff, R. Z. (2016). The innovation-performance linkage: Empirical evidence of Malaysian manufacturing SMEs. *International Soft Science Conference.* UK: Future Academy.

Zin, S. M., Ahmad, N., Ngah, N. E. B., Ismail, R. B., Ibrahim, N. B., & Abdullah, I. H. T. B. (2012). Motivation model for employee retention: Applicability to HRM practices in Malaysian SME sector. *Canadian Social Science*, *8*(5), 8-12.doi:10.3968/j.css.1923669720120805.2239

Employees' Personality Preferences and Their Impact on the Relationship between Leadership Styles and Organisational Commitment

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ABSTRACT

This research investigates whether personality traits influence employees' preferences for different styles of leadership and whether the congruence between the leadership style that employees prefer and the leadership style that they actually perceive can moderate the effects of a leader's leadership style on organisational commitment. Personality traits were measured using the NEO Five-Factor Inventory (Costa & McCrae, 1992), organisational commitment with a scale developed by Meyer and Allen (1997), and leadership styles using the Leadership Assessment Inventory (Burke, 1994). This cross-sectional study involved 312 employees from an automotive company in Tehran, Iran. The results indicate that individuals with extraversion and openness to experience personality traits tend to prefer the transformational leadership style, while those with conscientiousness and neuroticism personality traits prefer the transactional leadership style although no association was found for agreeableness. Moreover, it is found that the congruence between the leadership style which employees prefer and the leadership style they actually perceive moderates the effects of the leadership style on affective commitment.

Keywords: Organisational commitment, personality traits, transactional leadership style, transformational leadership style

INTRODUCTION

In a world where organisations are dealing with an increased turnover intention among new generations of employees, much of the discussion has been devoted to employee commitment and how employees may be retained in the workplace (Saridakis & Cooper, 2016). A serious disloyalty

challenge has been presented among business leaders globally by a Deloitte survey (2016), which found that 66% of 7,700 millennials from 29 countries reported a desire to quit their current organisations by 2020. Comparatively, the US Bureau of Labor (2016) also showed a decreased median for tenure to 2.8 years from 3 years in 2014 or 3.2 years in 2012 for employees aged between 25 and 34 years old.

In Iran, the "Business Watch" website (2014) revealed a moderate level of organisational commitment for non-managerial-level employees working in auto-part companies. Sabui (2015) argued that employees' loyalty had become one of the serious challenges in the automotive industry, resulting in an increased turnover rate and lost intangible assets and intellectual resources, while today's uncertain *economic* environment requires organisations to retain their competent and qualified workforce as a source of competitive advantages.

One of the most significant factors affecting an employee's commitment is the behaviour of the leader defined as leadership style. Some leaders inspire employees to stay motivated and strive enthusiastically for the achievement of organisational goals, whereas others set goals, exert control over situations and promise rewards to encourage employees towards goals. The former have been conceptualised as the transformational leadership style and the latter as the transactional leadership style (Bass, 1985). There have been many studies supporting the relationship between leadership styles and organisational commitment, of which a very large number has specifically focussed on only the transformational leadership style (Patiar & Wang, 2016) and ignored the influential effects of the transactional leadership style on employees' commitment. However, researchers who examined the effects of both transformational and transactional leadership styles on organisational commitment reported inconsistent results. For instance, some empirical research shows that transformational leadership has a higher impact on organisational commitment than transactional leadership (Khan, Umber, Ahmad, & Shan, 2016), while there is evidence to show that both leadership styles have a positive significant effect on organisational commitment (Chirchir & Ngeno, 2014; Makhathini & Van Dyk, 2018). Surprisingly, it has been revealed that the transformational leadership style does not lead to organisational commitment in all contexts (Mesu et al., 2015) and it may have a significant negative relationship with organisational commitment (Asiri et al., 2016).

Organisational commitment has been well developed by Allen and Meyer (1990), who proposed three dimensions of commitment: affective commitment, normative commitment and continuous commitment. They believed that work experience was the strongest antecedent of commitment, especially the experience that satisfied people's psychological needs and reinforced the growth of commitment among employees. Morris and Sherman (1981)

posited that the quality of the relationship between leaders and followers was a source of positive experience that provided opportunities for growth of attachment, and in this process, the leader's behaviour exerted a powerful influence although it was not the only determining factor. On the followers' side, it is argued that a leader's behaviour is not impressive unless it is accepted by the followers who are open to the idea of the leader (Ehrhart & Klein, 2001).

In search for the reason behind an individual's tendency to accept a particular type of leadership, the majority of research focussed on personality congruence of the leaders and the followers (Yang et al., 2017) based on the logic that people are more likely to continue working with leaders who are similar to them in personality and characteristics. Personality similarity might be one solution to increasing loyalty; however, in cases where leaders differ from their followers in personality, how followers are supposed to be attracted and to commit to the leaders remains a question. Little is known about the different leadership styles preferred by different types of personality and how the followers' preferences moderate the effects of leadership style on organisational commitment. Scholars have recommended uncovering variables that explain the relationship between leadership style and organisational commitment (Dale & Fox, 2008) and investigating the interaction effects of personality traits on organisational outcome in general (Monzani et al., 2015) and organisational commitment

in particular (Choi et al., 2015).

Based on the Path-Goal Theory (House, 1971), this research has focussed on, first, the relationship between personality traits and leadership style preferences, and secondly, on how the congruence between the preferred leadership style by employees and the leadership style they actually perceive can moderate the effects of leadership style on organisational commitment. The Path-Goal Theory postulates that leaders' behaviour, in the clarification of subordinates' path to a goal, is likely to be either effective or ineffective, depending on situational factors such as followers' characteristics. According to this theory, whether a particular leadership style is motivational and effective depends on the level of subordinates' preferences for that style of leadership. Followers' individual differences require leaders to choose a leadership style that seems appropriate for a certain type of follower (House, 1996). It implies that the influence of transactional and transformational leadership styles on organisational commitment would depend on the level of congruence between subordinates' perceived and preferred leadership styles.

Personality Traits, Leadership Styles and Organisational Commitment

According to the Five-Factor Model of Personality Traits, individuals are classified and labelled under openness to experience, extraversion, conscientiousness, agreeableness and neuroticism. Openness to experience refers to the degree to which

an individual has a wide range of interests, creativity, divergent thinking, curiosity and open-mindedness (McCrae & John, 1992). Raja and Johns (2010) in the examination of the personality impact on creativity showed that out of the Big Five dimensions, only openness to experience had a significant main effect on creativity. Intuitive abilities have been also explored to be significantly predicted by openness to experience personality facets (Sobkow et al., 2018). Ehrhart and Klein (2001) asserted that followers who were looking for opportunities to implement their creative suggestions in the workplace considered charisma as being the favourable style of leadership and described it as innovative, energised and open-minded. Çekmecelioğlu and Özbağ (2016) indicated that dimensions of transformational leadership style including intellectual stimulation, inspirational motivation and idealized influence facilitate individuals' creativity. Based on this, the following hypothesis was formulated:

> H1a: There is a significant influence of openness to experience personality traits on preference for the transformational leadership style.

According to Bass (1985), transformational leaders create a strong relationship with subordinates, set ambitious and collective goals, encourage teamwork and give personal attention to each follower. They do not directly influence the team outcome; rather, through stimulation of communication among members, which forms a basis for teammates' trustworthiness

(Boies et al., 2015), they might meet the need of those individuals displaying the trait of extraversion. Extraverts have a great tendency to be talkative, assertive, sociable, ambitious and energetic (McCrae & John, 1992) and they seek social contact, attention and fun (McCrae & Costa, 2003). They exhibit more adaptive performance when social competency is intensified (Wihler et al., 2017). Research has supported the finding that these qualities help extraverts to build individually-driven networks (Shipilov et al., 2014) and develop energising relationships with teammates that are a better way of working together and positively related to proactive performance (Cullen-Lester et al., 2016). Thus, it is possible to assume that:

> H1b: There is a significant influence of the extraversion personality trait on preference for the transformational leadership style.

Agreeableness mirrors some features such as being compliant, straightforward, cooperative and tender-minded . Agreeable people tend to care about others' feelings and avoid conflicts and fights (Costa et al., 1991). They become increasingly distressed when interpersonal conflict escalates compared with their less agreeable counterparts (Suls et al., 1998). Researchers such as Guo et al. (2017) have even shown that agreeableness has a significant negative relationship with creativity; it might be because creativity involves producing ideas that are often regarded as challenging and may disrupt interpersonal relationships

and cause tension (Lim & Choi, 2009). Agreeableness was negatively significantly related to stimulation (exciting and varied life) in a study conducted by Hietalahti et al. (2018). Therefore, agreeable people might have an aversion to transformational leadership and prefer transactional leaders who follow standards and rules, are resistant to change and do not expect employees to be creative or suggest solutions for problems (Bojeun, 2013). Therefore, it is argued that:

H1c: There is a significant influence of the personality trait of agreeableness on preference for transactional leadership style.

Conscientiousness represents characteristics such as being cautious and thoughtful. It is a propensity for keeping the environment in order and well-organised, following the standards strictly, striving for achievement and continuing with a defined task despite boredom (Costa et al., 1991). Chamorro-Premuzic (2006) argued that although this characteristic is a strong predictor of performance and accomplishment, it is mainly relevant to those tasks that have been well-defined, where divergent thinking is not required. It seems *conscientiousness* is opposed to cognitive abilities (Rammstedt et al., 2016) and risk-taking behaviour as well (Merritt & Tharp, 2013). By inference, these individuals are receptive to transactional leadership, which is known to focus on performance, apply standards and regulation to get work done, recognise accomplishments, take

corrective actions and give a promise of rewards or punishments. This is the reason why the current study aimed to test whether:

H1d: There is a significant influence of the personality trait of conscientiousness on preference for the transactional leadership style.

Neuroticism is described as a negative emotion and an inclination towards negative affects such as anxiety, anger, depression and vulnerability (McCrae & John, 1992). It is associated with psychological distress in dealing with short-term and long-term changes in life (Ormel & Wohlfarth, 1991). Neurotic individuals tend to be afraid of novel situations (Wiggins, 1996) and to be rigid (Perera et al., 2018). They are emotionally unstable and sensitive, leading to volatile relationships and interrelationships at work as they have a more difficult time coping with stress and they are easily affected by their surrounding environment (Grznar, 2013). Neuroticism has been found to have a significant negative association with preference for a fast pace and high demand of tasks (Sterns et al., 1983), efficiency (Yeh et al., 2016), team performance (Amir et al., 2014), innovation (Da Costa et al., 2015) and motivation to change (Patterson & Zibarras, 2017). In addition, neurotic individuals might not trust transformational leaders as such leaders focus on positive events, support new ideas, empower followers by emphasising teamwork and set high goals and instil confidence in followers to reach goals through extra effort (Shamir et al.,

1993). In contrast, transactional leaders, with their emphasis on definition of tasks and standards, provide a less challenging context that neurotic individuals may prefer. Thus, it is assumed that:

> H1e: There is a significant influence of the personality trait of neuroticism on preference for the transactional leadership style.

According to Jung (1971), personality acts as an intrinsically preferred motivational force towards pursuing goals in the unconscious and is found to be an effective factor on work-related outcomes. Findings have revealed that employees' preferences for a certain type of leadership to another contribute to the enjoyment and high performance of the employees (Ehrhart & Klein, 2001) and can affect organisational commitment (Felfe & Schyns, 2010). Sadler and Hofstede (1976) suggested that the difference between leadership styles preferred by followers and that exerted by managers had an impact on the level of satisfaction and much mismatch between the two causes employees' short-term retention. Moreover, Monzani et al. (2015) observed individual differences between leadership styles and task performance. Therefore, it is argued that:

> H2: The relationship between leadership style and organisational commitment will be moderated by the congruence between individuals' preferred and perceived leadership styles.

MATERIALS AND METHODS

The approach of this study was quantitative, with a descriptive cross-sectional survey design using a self-administered questionnaire that was initially conducted in a pilot test involving workers from an automotive manufacturing company located in Tehran, Iran. It was the only automotive manufacturing company, among those that were contacted, that agreed to participate in this survey.

Sample-size determination was based on Krejcie and Morgan's formula (1970), which is a commonly used method; it approximately gives a maximum sample size of any defined population with unknown variance. According to Krejcie and Morgan (1970), a sample size of 381 employees is sufficient to represent the population. But considering the response rate, 500 questionnaires were distributed by the researcher among employees, who were randomly selected from a complete sampling frame that covered all full-time employees in all departments and in various job classifications within the company, except for CEO and board of directors. The number of samples drawn from the different departments was determined based on the ratio of the number of workers in each department to the whole population. All subjects received a questionnaire with a cover letter that provided them with the necessary information about the study. Out of the distributed questionnaires, 320 were returned, 312 of which had valuable responses that could be statistically analysed. The gender composition of the

sample was 67% male (N=209) and 33% female (N=103).

Personality was assessed using the NEO Five-Factor Inventory developed by Costa and McCrae (1992), which consisted of 60 items measuring the extent of extraversion (e.g. "I always like to have many people around me"), agreeableness (e.g. "I try to be polite and well-behaved"), conscientiousness (e.g. "I can plan well so that things are done on time"), neuroticism (e.g. "I often get angry with the way people treat me"), and openness to experience (e.g. "I often try new and unfamiliar foods"). The Cronbach's alpha for the scale was α=0.72.

Three components of organisational commitment (affective, continuous and normative) were measured by the Revised Commitment Scale of Meyer and Allen (1997), which contained 18 items (six items to measure each component). Responses were rated on a 5-point Likert scale (1 = "strongly disagree", 2 = "disagree", 3 = "neither agree nor disagree", 4 = "agree", 5 = "strongly agree"). Sample items are, "I'll be very happy to spend the rest of my life in this organisation" (affective commitment); "Currently, due to the lack of a good job in other organisations, it is not possible for me to leave here" (continuous commitment); and "I would feel guilty if I left my organisation" (normative commitment). The reliability of the scale was α=0.71.

Transactional and transformational styles of leadership were assessed by the Leadership Assessment Inventory scale (Burke, 1994). Each item on the scale consisted of a pair of options measuring the actual perceived leadership style. An example item for this scale is: "A: My manager tries to maintain stability, B: My manager tries to create changes." Respondents were also asked to choose from another pair of options measuring the employees' preferred leadership style. An example item is: "A: I prefer those managers who try to maintain stability, B: I prefer those managers who create changes." The difference in the scores for the perceived and the preferred leadership style were computed to form an indication of congruence. The Cronbach's alpha coefficient for this scale was α=0.69.

RESULTS AND DISCUSSION

Overall, linear regression was performed to determine the association between the Big Five personality traits and leadership styles, and it was observed that the transformational leadership style was strongly preferred by individuals with openness to experience and extraversion personality traits. In contrast, conscientiousness and neuroticism were significantly associated with a tendency towards the transactional leadership style (Table 1). Furthermore, moderator analyses were conducted using hierarchical regression, which showed the interaction between leadership style and the congruence between perceived and preferred leadership style that affects an individual's level of affective commitment (Table 2); those employees who perceived higher congruence experienced a higher level of affective commitment (Figure 1).

H1a investigated the association between openness to experience and preferences for transformational leadership style. The statistical evidence supported this link and revealed that the transformational leadership style was more likely to be preferred by individuals with this type of personality ($\beta=0.60$, $p<0.01$). Likewise, extraversion was associated with the transformational leadership style ($\beta=0.35$, $p<0.01$) and provided support for H1b. H1d, conscientiousness trait ($\beta=0.65$, $p<0.01$) and H1e, neuroticism trait ($\beta=0.12$, $p<0.05$), showed a tendency towards the transactional leadership style. H1c was not supported since there was no significant association between agreeableness and transactional leadership style.

Table 1
Personality traits and leadership style preferences

Variables	Transformational Leadership Style			Transactional Leadership Style		
	B	(β)	t	B	(β)	t
Openness to Experience	0.68	0.60	12.59**	0.02	0.02	0.34
Extraversion	0.38	0.35	7.77**	-0.07	-0.08	-1.07
Agreeableness	0.014	0.013	0.33	0.10	0.12	1.82
Conscientiousness	-0.015	-0.014	-0.41	0.54	0.65	10.61**
Neuroticism	0.019	0.015	0.46	0.12	0.12	2.05*

* $p<0.05$, ** $p<0.01$

Table 2
Hierarchical regression analyses for moderating effect of congruence between perceived and preferred leadership style on the relationship between leadership styles and affective commitment

Variables	R^2	F	B	(β)	t
	0.87	712.86**			
Transformational leadership style			0.54	0.90	35.78**
Perceived and preferred leadership style congruence			0.02	0.03	1.39
Transformational leadership style × Perceived and preferred leadership style congruence			0.02	0.05	2.51*
	0.65	192.97**			
Transactional leadership style			0.18	0.31	8.69**
Perceived and preferred leadership style congruence			0.37	0.62	15.98**
Transactional leadership style × Perceived and preferred leadership style congruence			0.26	0.52	13.77**

* $p<0.05$, ** $p<0.01$

Hierarchical regression indicated that the effect of the transformational leadership style on affective commitment was statistically significant ($\beta=0.90$, $p<0.01$), but the impact of perceived and preferred leadership style congruence was not statistically significant ($\beta=0.03$, $p>0.05$). The main effect of perceived and

preferred leadership style congruence on affective commitment was statistically significant when it was combined with transformational leadership style (β=0.05, p<0.05), which explained 87% of the variance in affective commitment (R^2=0.87, p<0.01). Transactional leadership style showed a significant positive effect on affective commitment (β=0.31, p<0.01), which was found to be moderated by the perceived and preferred leadership style congruence (β=0.52, p<0.01) and accounted for 65% of total variance in affective commitment (R^2=0.65, p<0.01). However, the results did not demonstrate a significant moderating effect for the congruence between perceived and preferred leadership style on the relationship between the leadership styles and the two other components of organisational commitment, neither normative nor continuous.

The following graph (Figure 1) shows differences in the relationship between leadership style and affective commitment with respect to the levels of congruence that the participants perceived. It was shown that the correlation between transformational leadership style and affective commitment would be higher (r=0.94) for those who perceived a higher level of congruence compared to moderate (r=0.79) or low (r=0.68) congruence. The correlation between transactional leadership style and affective commitment was stronger (r=0.50) for respondents with a high congruence level than other levels, moderate (r=0.41) or low (r=0.31).

According to the results, openness to experience was associated with the transformational leadership style; this aligns with the proposition that transformational leaders make arrangement for creativity
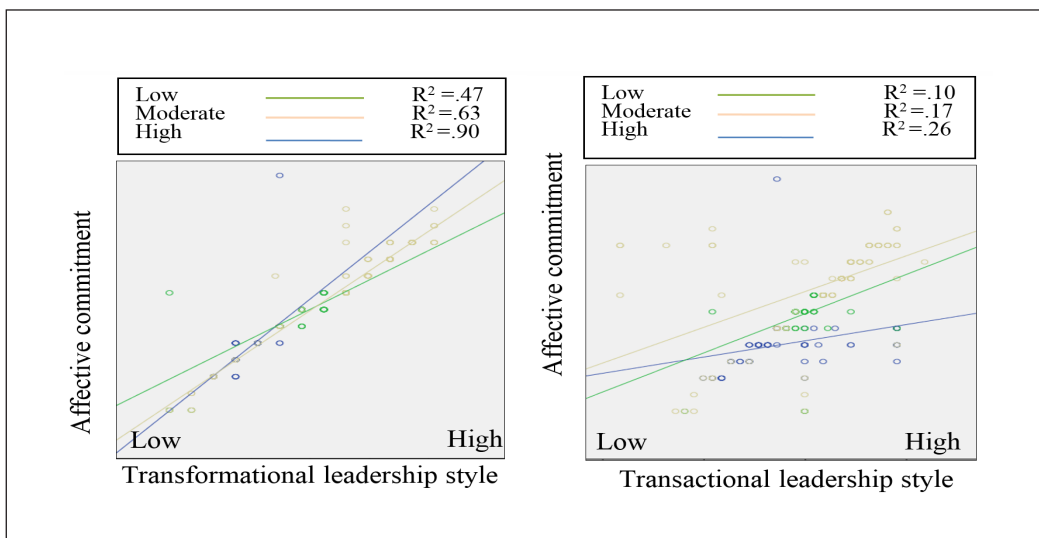
Figure 1. The effect of leadership styles (transformational and transactional) on affective commitment with respect to the level of congruence between perceived and preferred leadership styles

and novelty (Bass, 1985), a trait that might be sought by individuals who are open-minded (McCrae & John, 1992), intuitive (Sobkow et al., 2018) and creative (Raja & Johns, 2010). Similarly, extraverts who are typically energetic and sociable (McCrae & John, 1992) tend to prefer the transformational leadership style, which provides opportunities for teamwork and communication among people (Boies et al., 2015).

In contrast, people with conscientiousness and neuroticism traits showed a tendency towards the transactional leadership style. This finding is consistent with the argument that the conscientiousness trait is not related to cognitive ability (Rammstedt et al., 2016) or risk-taking behaviour (Merritt & Tharp, 2013). The current results confirmed that the neuroticism trait is likely to be positively associated with rigidity (Perera et al., 2018) and negatively associated with creativity (Da Costa et al., 2015) and motivation to change (Patterson & Zibarras, 2017).

Agreeableness demonstrated a relationship with neither transactional nor transformational leadership style. This personality type might be inclined towards the *laissez-faire* leadership style since leaders who choose this type of leadership are disconnected from their followers and are less likely to incite conflict (Bass, 1985). Future research, therefore, could include the three types of leadership styles to observe the tendency of agreeable individuals and find a proper leadership style for those who hold this personality trait.

The results of this study were consistent with the findings of researchers who reported a relative relationship between both transactional and transformational leadership styles and organisational commitment (Chirchir & Ngeno, 2014; Makhathini & Van Dyk, 2018). This study identified the moderating effect of congruence between perceived and preferred leadership styles on affective commitment, which extends the value of this study beyond that of previous research. The findings suggested that both leadership styles, transactional and transformational, can foster affective commitment among employees depending on the degree to which they are congruent with the followers' preferences. This result is consistent with the idea that personality is a powerful predictor of preferences for leadership style, and leadership is not effective unless followers accept their leaders (Ehrhart & Klein, 2001; House, 1996). Therefore, in order to enhance the level of affective commitment in an organisational context, it is important to have an initial assessment of the personality traits of subordinates as this will provide valuable insight into their preferences and acceptance of the style that the leaders apply, and then to adopt a flexible leadership style that is congruent with the preferences of each personality type of the followers who come under the jurisdiction of the leader.

Gaining insight into the dynamic interaction of leadership, organisational commitment and personality trait is necessary to clear up the boundary conditions

of the related theories on leadership and to improve the effectiveness of leadership practices in organisations in order to enhance affective commitment and lower the rate of turnover that eventually contributes to the development, growth and survival of an organisation in today's business environment. The major limitation of this research is related to the generalisation of the findings to other industries and public organisations or to other countries since the sample was limited to the automotive industry in Iran. Therefore, it is recommended that future research examine the relationship between variables in another population. Moreover, gender and cohort differences might confound the nature of the relationship between leadership style and personality; as people grow older, they tend to be less open, extraverted and neurotic (Costa et al., 1986), or women who experience more emotional sensitivity are more likely to be agreeable than men (Costa et al., 2001). This serves as a basis for future research to test the relationship between personality and leadership style with respect to age and gender differences, which in turn, influences followers' preferences.

CONCLUSION

The results of this study suggest that the Big Five personality traits can be an informative framework in explaining employees' tendencies towards a certain type of leadership. As shown, the traits of openness to experience and extraversion were significantly linked to the transformational leadership style and conscientiousness and neuroticism were significantly related to the transactional leadership style, while agreeableness was linked to neither leadership style. Moreover, this study identified the moderating effect of congruence between perceived and preferred leadership styles on affective commitment, suggesting that the more employees perceive high levels of congruence between leadership style which they prefer and the one which they actually perceive, the more they will experience a higher level of affective commitment; this in turn, may result in lower turnover intention.

REFERENCES

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology, 63,* 1–18.

Amir, F., Naz, F., Hafeez, S. Q., Ashfaq, A., & Dogar, Y. H. (2014). Measuring the effect of five-factor model of personality on team performance with moderating role of employee engagement. *Journal of Psychology and Behavioral Science*, *2*(2), 221–225.

Asiri, S. A., Rohrer, W. W., Al-Surimi, K., Da'ar, O. O., & Ahmed, A. (2016). The association of leadership styles and empowerment with nurses' organizational commitment in an acute health care setting: a cross-sectional study. *BMC Nursing*, *15*(1), 38.

Bass, B. M. (1985). *Organizational dynamics*. NY: Academy of Leadership.

Boies, K., Fiset, J., & Gill, H. (2015). Communication and trust are key: Unlocking the relationship between leadership and team performance and creativity. *The Leadership Quarterly*, *26*(6), 1080–1094.

Bojeun, M. C. (2013). *Program management leadership: Creating successful team dynamics*. Boca Raton, Florida, USA: CRC Press.

Burke, W. W. (1994). *Leadership assessment inventory* (rev ed.). Pelham, NY: W. Warner Burke and Associates.

Business Watch. (2014). Employee job satisfaction and commitment in automotive & transportation industry. Retrieved January 7, 2017, from: http://www.bizwatch.ir/

Çekmecelioğlu, H. G., & Özbağ, G. K. (2016). Leadership and Creativity: The impact of transformational leadership on individual creativity. *Procedia-Social and Behavioral Sciences*, *235*, 243–249.

Chamorro-Premuzic, T. (2006). Creativity versus conscientiousness: Which is a better predictor of student performance? *Applied Cognitive Psychology*, *20*(4), 521–531.

Chirchir, R. K., & Ngeno, A. K. W. K. V. (2014). Leadership style and teachers commitment in public primary schools in Bomet County, Kenya. *Leadership*, *5*(39), 175-183.

Choi, D., Oh, I. S., & Colbert, A. E. (2015). Understanding organizational commitment: A meta-analytic examination of the roles of the five-factor model of personality and culture. *Journal of Applied Psychology*, *100*(5), 1542.

Costa Jr, P. T., McCrae, R. R., Zonderman, A. B., Barbano, H. E., Lebowitz, B., & Larson, D. M. (1986). Cross-sectional studies of personality in a national sample, II. Stability in neuroticism, extraversion, and openness. *Psychology and Aging*, *1*(2), 144-149.

Costa Jr, P., Terracciano, A., & McCrae, R. R. (2001). Gender differences in personality traits across cultures: Robust and surprising findings. *Journal of Personality and Social Psychology*, *81*(2), 322-331.

Costa, P. T., McCrae, R. R., & Dye, D. A. (1991). Facet scales for agreeableness and conscientiousness: A revision of the NEO Personality Inventory. *Personality and Individual Differences*, *12*(9), 887–898.

Costa, P. T. Jr., & McCrae, R. R. (1992). NEO personality inventory-revised (NEO PI-R) and NEO five-factor inventory (NEO-FFI) professional manual. Odessa, FL: Psychological Assessment Resources, Inc.

Cullen-Lester, K. L., Leroy, H., Gerbasi, A., & Nishii, L. (2016). Energy's role in the extraversion (dis)advantage: How energy ties and task conflict help clarify the relationship between extraversion and proactive performance. *Journal of Organizational Behavior*. *37*(7), 1003-1022.

Da Costa, S., Páez, D., Sánchez, F., Garaigordobil, M., & Gondim, S. (2015). Personal factors of creativity: A second order meta-analysis. *Revista de Psicología del Trabajo y de las Organizaciones*, *31*(3), 165–173.

Dale, K., & Fox, M. L. (2008). Leadership style and organizational commitment: Mediating effect of role stress. *Journal of Managerial Issues*, *20*(1): 109–130.

Deloitte Touche Tohmatsu (Firm). (2016). The 2016 Deloitte millennial survey: Winning over the next generation of leaders. Retrieved January 7, 2017, from https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-millenial-survey-2016-exec-summary.pdf

Ehrhart, M. G., & Klein, K. J. (2001). Predicting followers' preferences for charismatic leadership: The influence of follower values and personality. *Leadership Quarterly*, *12*, 153–179. doi: 10.1016/S1048-9843(01)00074-1

Felfe, J., & Schyns, B. (2010). Followers' personality and the perception of transformational leadership: Further evidence for the similarity hypothesis. *British Journal of Management*, *21*(2), 393–410.

Grznar, S. (2013). *Work design and conflict in the workplace: The moderating effect of personality* (Unpublished master's thesis). Université de Montréal, Montreal, Canada.

Guo, J., Su, Q., & Zhang, Q. (2017). Individual creativity during the ideation phase of product innovation: An interactional perspective. *Creativity and Innovation Management*, *26*(1), 31–48.

Hietalahti, M., Tolvanen, A., Pulkkinen, L., & Kokko, K. (2018). Relationships between personality traits and values in middle aged men and women. *Journal of Happiness and Well-Being*, *6*(1): 18-32.

House, R. J. (1971). A path-goal theory of leader effectiveness. *Administrative Science Quarterly, 16*(3), 321–339.

House, R. J. (1996). Path-Goal theory of leadership: Lessons, legacy, and a reformulated theory. *The Leadership Quarterly*, *7*(3), 323–352.

Jung, C. G. (1971). *Psychological types.* Princeton, NJ: Princeton University Press.

Khan, U., Khan, A. S., Umber, H. W., Ahmad, A., & Shan, K. (2016). Impact of transactional & transformational leadership styles on organizational commitment – A case of private sector universities of Karachi. *International Journal of Management Sciences and Business Research, 5*(11), 100–108.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610.

Lim, H. S., & Choi, J. N. (2009). Testing an alternative relationship between individual and contextual predictors of creative performance. *Social Behavior and Personality: An International Journal, 37,* 117–136.

Makhathini, T. N., & Van Dyk, G. A. (2018). Organisational climate, job satisfaction, and leadership style influences on organisational commitment among South African soldiers. *Journal of Psychology in Africa*, *28*(1), 21–25.

McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, *60*(2), 175–215.

Merritt, C. J., & Tharp, I. J. (2013). Personality, self-efficacy and risk-taking in parkour (free-running). *Psychology of Sport and Exercise*, *14*(5), 608–611.

Mert, I. S., Baş, T., & Keskin, N. (2010). Leadership style and organizational commitment: Test of a theory in Turkish banking sector. *Journal of Academic Research in Economics (JARE)*, *2*(1), 1–19.

Mesu, J., Sanders, K., & Riemsdijk, M. V. (2015). Transformational leadership and organisational commitment in manufacturing and service small to medium-sized enterprises: The moderating effects of directive and participative leadership. *Personnel Review*, *44*(6), 970–990.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application.* Thousand Oaks, CA.: Sage Publications.

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, *61*(1), 20–52.

Monzani, L., Ripoll, P., & Peiró, J. M. (2015). The moderator role of followers' personality traits in the relations between leadership styles, two types of task performance and work result satisfaction. *European Journal of Work and Organizational Psychology*, *24*(3), 444–461.

Morris, J. H., & Sherman, J. D. (1981). Generalizability of an organizational commitment model. *Academy of Management Journal*, *24*(3), 512–526.

Ormel, J., & Wohlfarth, T. (1991). How neuroticism, long-term difficulties, and life situation change influence psychological distress: A longitudinal model. *Journal of Personality and Social Psychology*, *60*(5), 744-755.

Patiar, A., & Wang, Y. (2016). The effects of transformational leadership and organizational commitment on hotel departmental performance. *International Journal of Contemporary Hospitality Management*, *28*(3), 586–608.

Patterson, F., & Zibarras, L. D. (2017). Selecting for creativity and innovation potential: Implications for practice in healthcare education. *Advances in Health Sciences Education*, 1–12.

Patterson, F., & Zibarras, L. D. (2017). Selecting for creativity and innovation potential: Implications for practice in healthcare education. *Advances in Health Sciences Education*, *22*(2), 417–428.

Perera, H. N., Granziera, H., & McIlveen, P. (2018). Profiles of teacher personality and relations with teacher self-efficacy, work engagement, and job satisfaction. *Personality and Individual Differences*, *120*, 171–178.

Raja, U., & Johns, G. (2010). The joint effects of personality and job scope on in-role performance, citizenship behaviors, and creativity. *Human Relations, 63*, 981–1005.

Rammstedt, B., Danner, D., & Martin, S. (2016). The association between personality and cognitive ability: Going beyond simple effects. *Journal of Research in Personality*, *62*, 39–44.

Sabui, M. (2015). *The effect of organizational culture on organizational commitment of automotive companies.* Unpublished Doctoral Dissertation. Azad University, Tehran, Iran.

Sadler, P. J., & Hofstede, G. H. (1976). Leadership styles: Preferences and perceptions of employees of an international company in different countries. *International Studies of Management & Organization*, *6*(3), 87–113.

Saridakis, G., & Cooper, C. (Eds.). (2016). *Research handbook on employee turnover*. Cheltenham, UK: Edward Elgar Publishing.

Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science*, *4*(4), 577–594.

Shipilov, A., Labianca, G., Kalnysh, V., & Kalnysh, Y. (2014). Network-Building behavioral tendencies, range, and promotion speed. *Social Networks*, *39*, 71–83.

Sobkow, A., Traczyk, J., Kaufman, S. B., & Nosal, C. (2018). The structure of intuitive abilities and their relationships with intelligence and openness to experience. *Intelligence*, *67*, 1–10.

Sterns, L., Alexander, R. A., Barrett, G. V., & Dambrot, F. H. (1983). The relationship of extraversion and neuroticism with job preferences and job satisfaction for clerical employees. *Journal of Occupational Psychology*, *56*(2), 145–153.

Suls, J., Martin, R., & David, J. P. (1998). Person-environment fit and its limits: Agreeableness, neuroticism, and emotional reactivity to interpersonal conflict. *Personality and Social Psychology Bulletin*, *24*(1), 88–98.

United States Department of Labors' Bureau of Labor Statistics. (2016). Employee tenure in 2016. Retrieved January 6, 2017, from https://www.bls.gov/news.release/pdf/tenure.pdf

Wiggins, J. S. (Ed.). (1996). *The five-factor model of personality: Theoretical perspectives*. New York, USA: Guilford Press.

Wihler, A., Meurs, J. A., Wiesmann, D., Troll, L., & Blickle, G. (2017). Extraversion and adaptive performance: Integrating trait activation and socioanalytic personality

theories at work. *Personality and Individual Differences*, *116*, 133–138.

Yang, K., Yan, X., Fan, J., & Luo, Z. (2017). Leader-follower congruence in proactive personality and work engagement: A polynomial regression analysis. *Personality and Individual Differences*, *105*, 43–46.

Yeh, S. C. J., Yuan, K. S., Chen, S. H. S., Lo, Y. Y., Chou, H. C., Huang, S., & Wan, T. T. (2016). The moderating effect of leadership on the relationship between personality and performance. *Journal of Nursing Management*, *24*(7), 869–883.

Knowledge and Attitudes of Hoteliers in Langkawi UNESCO Global Geopark towards Sustainable Food Waste Management (SFWM)

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ABSTRACT

The main issues of sustainability currently addressed by hoteliers are energy and water saving as well as solid waste management. However more efforts are needed to increase hoteliers' commitment towards addressing sustainable food waste management (SFWM) in their operation. This article aims to examine the level of knowledge hoteliers have regarding the implementation of SFWM, and their attitude towards the effort. The Langkawi UNESCO Global Geopark is the site for the case study. Data was gathered using structured and self-administered questionnaires, completed by 42 hoteliers on the island. In general, the main findings indicated a strong correlation (r=0.769) between knowledge and attitude towards SFWM among hoteliers who were mostly influenced by hotel policy to minimize food wastage, particularly by reusing quality leftover food. It was also found that hoteliers were better prepared during the early process of SFWM implementation as they had better control in reducing food waste. However, unsustainable food consumption patterns of customers still pose a challenge in managing food waste. In order to effectively minimize food waste, it is suggested that hoteliers apply the concept of green and sustainable practice for each of the activities related to food waste management. Concerted efforts are needed to seek innovative solutions to food waste management in the island for the sake of present and future sustainability.

INTRODUCTION

Island tourism has become a popular attraction according to statistics on the global tourism industry, not only contributing significantly to the local economy but also

providing employment opportunities in many ways (Kasimu, Zaiton, & Hassan, 2012). An island is a site with a highly sensitive area and it also has a unique nature, making it an attractive tourism product. The hotel sector is among the major players for the growing tourism industry in island destinations. It is important that business operations of the hotel sector take responsible measures in being more proactive in minimizing the impact of their operations on the environment for the sake of sustainable economic opportunities. Since the hotel sector is regarded as the largest food consumer that generates large quantities of food waste (Sandaruwani & Gnanapala, 2016), implementing green and sustainable practices for food waste management is crucial.

According to Alexander and Sarah (2002) food waste amounts to more than 46% of the total solid wastes generated by the US hotel sector. Hoteliers should consider the importance of reducing food waste because food and beverage expenses comprise a large portion of the operations cost. Adopting sustainable food waste management (SFWM) from the purchasing until the disposal phase would also increase resource efficiency while reducing food waste. SFWM would significantly reduce any negative impact on the environment, change social views and encourage action on the ground while boosting economic needs. However, hoteliers seem to be focusing merely on sustainable practices in the use of water, electricity, and recycling of solid waste (Pirani & Arafat, 2015; Samdin,

Bakori, & Hassan, 2012). Most the hotel operators do not realize that one of the biggest resource efficiency opportunities lies with SFWM (Sandaruwani & Gnanapala, 2016). For that reason, SFWM for the hotel sector needs to be studied in depth.

Hoteliers' response to SFWM depends on technical and organizational aspects. Different technical and organizational aspects affect people's knowledge and attitudes towards sustainable practices. Previous studies have primarily concentrated on food waste treatment (Li et al., 2013; Seng et al., 2013). However, as pointed out by Refsgaard and Magnussen (2009) most of the studies have emphasized the technological and material aspects, leaving out considerations of the level of knowledge and attitude. The study reported in this article aimed to examine the level of hoteliers' knowledge and their attitudes towards the implementation of SFWM, using the Langkawi UNESCO Global Geopark as a case study. This paper will also focus on assessing the relationship between level of knowledge and attitude towards food waste management. Concerted efforts are needed to seek innovative solutions for food waste management in the island for the sake of present and future sustainability.

LITERATURE REVIEW

Knowledge is one of the important aspects in determining the behaviour of a business organization, and influencing decision making (Samdin et al., 2012). Papargyropoulou et al. (2016) proposed that in the hotel industry, food provisioning, food

waste generation and food consumption should be studied together in order to gain knowledge about how, where, and why food waste is generated. Knowledge regarding of reducing food waste should be studied at every stage, from the purchasing of raw food ingredients, food storage, cooking, consumption, to the disposal of food waste. Attitude is a way of thinking or feeling about something which could lead to changes in behaviour (Rezai, Hosseinpour, & Shamsudin, 2015; Yusof et al., 2016). It also depends on the confidence an individual has about the outcome of his/her actions, either positive or negative. According to Azjein and Fishbein (1980) a person with a positive attitude expects to get a good outcome in implementing certain behaviours, and vice versa.

Furthermore, according to an investigation by Mustafa and Yusoff (2011) knowledge alone was not sufficient to motivate an individual to modify his behaviour, but a strong positive attitude would maintain a certain behaviour in the long term. Interestingly, this was contrary to the findings of a study conducted by Adeolu and Enesi (2014) that argued any activity must begin with assured adequate knowledge, which would be the driving force for the change in attitudes. In general, interesting results indicating the potential of knowledge and attitude on waste management have been reported. However, most of the studies in the literature do not simultaneously examine the knowledge and attitude towards food waste management using hotelier samples

(Adeolu & Enesi, 2014; Akbar et al., 2015; Hakim, Mohsen, & Bakr, 2014; Mustafa & Yusoff, 2011; Talonghari & Jamias, 2010). Hence, knowledge and attitude should be studied together, rather than separately, in order to better understand how food waste is managed.

This would then assist the research in suggesting a strategy for not only reducing food waste but also the operation costs of a hotel. For example, in the United Kingdom, the cost of managing food waste amounts to £318 million each year in the hotel sector, including food procurement, labour, utilities and waste management costs (International Tourism Partnership, 2014). Meanwhile, the Grand Hyatt Hotel in Singapore reportedly saves $100,000 a year simply by managing food waste and successfully recycling 500kg of food waste to become fertilizer within 24 hours using the Thermophilic Biomax Digester (Tan, 2017). Besides that, Coral Bay Hotel on Phuket Island, Thailand, has managed to reduce the generation of daily food waste from 300 Kg to 175 Kg by implementing sustainable food waste management (Khun, 2011). The case study reported here seeks to address previous research gap related to SFWM by assessing the knowledge and attitude of hoteliers Langkawi.

Research Questions

This paper explores two major factors that are considered important in shaping human behaviour: knowledge and attitude (Azjein & Fishbein, 1980). It is believed that what people know about SFWM will influence

their views and cause them to take action. A quantitative approach is used in this study aiming to answer the following research questions:

1. What is (i) the level of knowledge of hoteliers about sustainable food waste management and (ii) what is their attitude towards it?

2. What is the strength of the relationship between knowledge about sustainable food waste management and attitudes towards it?

RESEARCH APPROACH

Study Area

Langkawi Island is located in the Andaman Sea, around 30 km off the coast of north-western mainland Malaysia. Langkawi is well-known for its Global Geopark status, awarded by UNESCO in June 2007 (Halim, Komoo, Salleh, & Omar, 2011). Langkawi is the 52nd global geopark in the world and the first in Southeast Asia and Malaysia (Ong et al., 2010). It is one of the premier tourist island destinations in Malaysia. The tourist arrivals in Langkawi were 2.4 million in 2010 and this number has increased to 3.6 million in 2016 (Annual Report LADA, 2017). Many new hotels have been built to accommodate the growing tourist traffic.

A study conducted by Shamshiry et al. (2011) found that hotels in Langkawi typically generated large amounts of waste, in particular waste generated by tourists was double the waste per capita as compared to the local population. Food waste was found to be one of the highest components (43%) produced in Langkawi (Shamshiry et al., 2011). On the other hand, the Malaysian government intends to transform Langkawi into Malaysia's first low carbon island by 2030 (Bernama, 2016). This would contribute to making Langkawi a preferred eco-tourism destination in the global rankings. However, food waste generated from Langkawi's hotels sector potentially contribute to the increase in carbon. This is because the decomposition of food waste in landfills have the capacity to create methane, a greenhouse gas, twenty times more potent than CO_2 (Scotland, 2013). The high component of food waste can create the problem of limited landfill capacity (Fariz, Shaharudin, & Abdul, 2017) and also landfill leachate, which can affect the water quality in Langkawi (Sahabat Alam Malaysia, 2017; Shamshiry et al., 2011). These factors make Langkawi Island the most appropriate location for a case study as there is obviously an urgent need for research on SFWM in the hotels sector there.

Method

The study focused on selected hotels that provided accommodation together with food and beverage services. Data collection for the study was carried out from June to October 2016 from a sample of different categories of hotels within Langkawi Island, ranging from 1-star to 5-star hotels. A list of target respondents was initially taken from the Malaysian Association of Hotels (MAH) website and the Langkawi Municipal Council. The main reason for

using the MAH website was that they provided complete location details of hotels in Langkawi -postal addresses, e-mail addresses and also telephone numbers.

To increase the probability of getting a large sample size and to avoid a low response rate, all of the 56 hoteliers were initially included in the sampling criterion, which is any hotelier that provides accommodation together with food and beverage services. In order to seek cooperation from the hotels, personal visits and telephone calls were made. The early process of data collection was very challenging as some hotels refused to participate in the questionnaire survey and other hotels were under renovation. Most of the completed questionnaires were collected personally by the researchers, while a few others were collected through online surveys. A total of 42 survey forms were finally received from the 42 hoteliers. Respondents for this study consisted of the main persons-in charge of food waste management at each hotel.

A quantitative method was used to identify levels of knowledge and attitudes among hotel staff related to food waste. The questionnaire was a self-administered closed-ended questionnaire. A five-point Likert scale was used to measure the strength of the hoteliers' knowledge and their attitudes to food waste management, ranging from 1 for 'strongly disagree' to 5 for 'strongly agree'. Accordingly, 20 items on knowledge about SFWM were categorized into four types of construct items, namely knowledge about i) reducing spoilage of food waste, ii) waste from preparation of food, iii) leftover food waste, and iv) customer plate waste. Each construct had five items as its components. In addition to the construct items (20 items) about attitudes to SFWM, an analysis was also conducted on waste hierarchy pyramid focusing on prevention, reuse, composting, energy recovery, and disposal. Table 1 below explains these construct items in detail regarding knowledge and attitude towards SFWM.

Before the actual data collection commenced, the questionnaire was pilot-tested on a population that had characteristics similar to the sample population in other study areas, and based on the ambiguities noted, necessary revisions were made. The questionnaire was conducted by reviewing the literature for consistency and construct validity. The reliability test was carried out using the internal consistency approach, yielding a value of 0.92. This value meets the acceptance criteria of 0.70 and was considered acceptable (Pallant, 2005). The statistical methods used in this study were descriptive statistics of frequency, percentage, mean, standard deviation, and Pearson's r statistical analysis. All these were used to identify the correlation between knowledge and attitude. To assess the level of knowledge and attitude towards SFWM, the interpretation of mean score by Jamil Ahmad (2002) was used. If the mean score falls between the range of 1.00 to 2.33, the knowledge and attitude is considered as low level; between 2.34 to 3.66, the knowledge and attitude is at a moderate level; and between 3.66 to 5.00, the knowledge and attitude is at a high level.

Table 1
Construct items: details regarding knowledge and attitudes towards SFWM

Factors	Construct Items	Description
Knowledge	• Spoilage of food waste	• Knowledge regarding storage and purchasing food ingredients towards reducing food waste.
	• Waste from food preparation	• Knowledge regarding preparation of food in the kitchen.
	• Leftover food waste	• Knowledge regarding serving food and managing leftover food at buffet point.
	• Customer plate waste	• Knowledge regarding managing and reducing customer plate waste at dining.
Attitude	• Prevention	• Willing to participate in training and education on waste separation
	• Reuse	• Willing to reuse quality leftover food (by donating, letting staff take home, storing at right temperature) and low quality leftover food (fed to pets or animals).
	• Composting	• Willing to participate in composting activities in hotel
	• Energy Recovery	• Willing to practise future planning for energy recovery from food waste (useable form of energy such as electricity, heat or transportation fuels (e.g. diesel)
	• Disposal	• Attitude regarding food waste management before disposal (separation and keeping record of generation of food waste)

RESULTS AND DISCUSSION

Socio-demographic Characteristics of Respondents

Table 2 presents the socio-demographic characteristics of the respondents (gender, age, level of education, current position in the hotel, and work experience in the F&B department). The total number of respondents was 42 (28 males and 14 females). The majority of the respondents (71.4%) were within the age range of 31 to 50 years. About 21.4% of respondents were below 30 and 4.8% between 51 to 60. Based on the questionnaire, 40.5% of respondents had only up to secondary school education, and 9.5% had completed sixth form (STPM); while 23.8% had a diploma in hospitality and tourism, 14.3% of the

respondents had a diploma in an unrelated area of study. Only 7.1% of the respondents had a bachelor's degree in hospitality and tourism, while the 4.8% of them had a degree in some unrelated field.

The survey results show that 31% of the respondents were owners of the hotels and 69% were staff in management or operations (Table 2). The sample of respondents were from several different positions because of the different star ratings of hotels. The hotels had different operating systems for food waste management and the persons responsible for food waste management in each of the hotels were also different. Besides that, the respondents' work experience in the food and beverage department varied. While only 38.1% of

Table 2
Demographic characteristics of the respondents

		Frequency (N=42)	Percent (%)
Gender	Male	28	66.7
	Female	14	33.3
Age	Below 30	9	21.4
	31 Until 40	15	35.7
	41 Until 50	15	35.7
	51 Until 60	2	4.8
	60 Above	1	2.4
Level of Education	Completed Secondary school	17	40.5
	High School Certificate (STPM)	4	9.5
	Diploma in an unrelated field	6	14.3
	Diploma in hospitality and tourism	10	23.8
	Bachelor's Degree in an unrelated field	2	4.8
	Bachelor's Degree in hospitality and tourism	3	7.1
Current Position in hotel	Hotel staff (managerial/operations)	29	69.0
	Owners of hotel	13	31.0
Experience	Below 1 year	3	7.1
	1 year until 5 years	16	38.1
	6 years until 10 years	8	19.0
	11 years above	15	35.7

Source: Author, 2016

the respondents had worked 1 to 5 years in the industry, 19% had worked 6 to 10 years and 35.7% had worked more than 11 years.

Types of Food Waste from Hoteliers

Previous studies (Papargyropoulo et al., 2016; Sustainable Restaurant Association, 2010) have identified four types of food waste: 'Spoilage food waste caused by spoilage' is waste created from purchase of spoiled food ingredients and poor storage; 'Food waste during preparation' is waste produced during the food preparation stage, due to overproduction of food, peeling, cutting and over-cooking; 'Customer plate waste' is wastage caused by food left uneaten by customers after the food has been sold or served to them; and 'Leftover waste' is excess food that has been prepared but has not been touched by customers, thus, left on the buffet line and later discarded. As shown in Figure 1, the majority of hoteliers found that customer plate waste constituted the highest proportion of generated food waste (76%), followed by food waste during preparation (14%), leftover food waste (7%), and spoilage food waste (3%). Most of the hotels in Langkawi offered three main meals (breakfast, lunch and dinner) with a mix of different cuisines and types of food services (a combination of buffet style and *a la carte*). However, the offerings for the buffet depended on the number of customers. In other words, hoteliers provided buffet services according to the hotel's occupancy rate which was influenced by the holiday seasons or the presence of a high number of customers.

A study conducted by Papargyropoulou et al. (2016) argued that a hotel would generate high customer plate waste and leftover food waste if hoteliers followed the buffet style food service. On the other hand, a hotel would produce higher preparation food waste if it adopted the *a la carte* food services. The results of that study seem to resonate with the results of this research on hotels in Langkawi. Most of the hotels in Langkawi adopted the buffet style food service for breakfast and *a la carte* for lunch or dinner. This is the reason why hoteliers stated that their hotel produced more customer plate food waste and preparation food waste relative to other types of food waste. Buffet services in hotels in Langkawi depend greatly on the functions that take place every festive season and the types of individual events, and they cause daily differences in the quantity of food waste. According to 7% of the hoteliers, leftover food waste was still low because the quality

of leftover food was given to staff for their meals, but not allowed to be taken home. Most hotels in Langkawi prepare food for their guests and hotel staff separately. Any excess of untouched customers' food was allowed to be consumed by their hotel staff.

Only 3% of hoteliers found spoilage food waste generated the highest proportion of food waste. According to Saraswathy, Fariz and Sharina (2017) usually for small hotels, the hoteliers purchase the ingredients needed and they do not require specific suppliers because they only need to prepare meals for a small number of guests. The larger hotels have their own suppliers bringing raw food ingredients that they need. The suppliers are selected according to criteria such as timely delivery, product quality, consistent product, ability to support the required amount and price (Tan, 2002). The hoteliers also have to ensure that the raw food ingredients delivered are in good condition to prevent spoilage food waste.
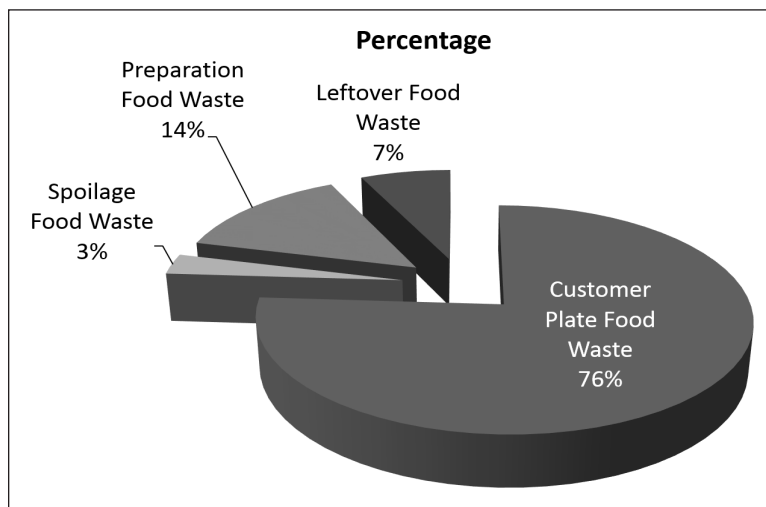
Figure 1. Types of food waste according to the perceptions of hoteliers (n=42). *Source:* Author, 2016

Hoteliers' Knowledge of SFWM

The results indicate that the mean score for knowledge on reducing spoilage food waste and preparation food waste was high where (M=3.98, SD=0.46) and (M=4.13, SD=0.57). Most of the hoteliers had their own internal systematic management from the purchasing to the food preparation stage to reduce operating costs for F&B management. Generally, the entire process from purchase, storage to food preparation is controlled by the hoteliers to prevent food spoilage waste and preparation of food waste at an early stage.

However, mean score for 'knowledge on reducing leftover food waste was moderate (M=3.34, SD=0.54). Usually, the quantity of food prepared is estimated based on the reservations made. However, hoteliers would prepare a larger quantity of food in case extra customers turn up that day without any reservations. Hoteliers make an excessive quantity of food to avoid last minute cooking but this would lead to leftover food waste. Therefore, accurate estimation on the number of customer arrivals is vital to avoid preparation of extra food. In other words, pre-booking is required so food could be prepared according to the actual number of customers. This could minimize food waste.

Besides that, the mean score for 'knowledge on reducing customer plate waste' was also moderate (M=3.48, SD=0.70). Usually, the generation of food waste from the stage of purchasing the ingredients, food storage and cooking would be influenced by the internal operations management of the hotel. However, customer plate waste was beyond the control of hoteliers because this kind of waste was influenced by the food consumption pattern of the guests. In other words, hoteliers are better prepared during the early process of SFWM implementation as they have better control in reducing food waste, but managing food waste due to unsustainable food consumption patterns of customers is beyond their control. Nonetheless, customer plate waste could be reduced by the hoteliers if they gave special and effective attention on serving style and timing, and type of food served, and if they could accurately predict the number of expected customers (Pirani & Arafat, 2015). The findings of the present study suggest that hoteliers should proceed with relevant actions to encourage their customers to reduce customer food waste. Kallbekken and Saelen (2013)'s study in Norway found that hoteliers were able to reduce customer plate food waste by 19.5% with the use of smaller plates.

Table 3
Hotelier's knowledge about SFWM

Construct items (n=42)		No items	Mean	SD	Interpretation
a.	Knowledge about reducing **Spoilage food waste**	5	3.98	0.46	High
b.	Knowledge about reducing **Preparation food waste**	5	4.13	0.57	High
c.	Knowledge about reducing **Leftover food waste**	5	3.34	0.54	Moderate
d.	Knowledge about reducing **customer plate food waste**	5	3.48	0.70	Moderate

*Five-point Likert type scale (1=strongly disagree and 5=strongly agree); =Mean, SD=Standard Deviation. *Source:* Author, 2016

Hoteliers' Attitudes to SFWM

Table 4 displays the results of analysis on the attitudes to SFWM in response to five types of construct items which were prevention, reuse, compost, energy recovery and disposal. The mean score for 'attitude to prevention' was high (M=4.06, SD=0.68). Many hoteliers adopting the prevention attitude were implementing strategies to minimize food waste: applying the first-in first-out system on food inventory, providing various portions to customers to choose from by the size of the dishes, requiring planning to cook dishes according to the number of customers, and so on. Birne (2010) found two main reasons for preventing food waste in the hospitality sector: one was considerable cost savings and the other was compliance with environmental laws. Preventing food waste is an action that can be considered at an early stage and is also one of the best and easy options to reduce waste compared to treatments or other options such as reuse, composting, and energy recovery. The prevention attitude could change the way business is conducted and help reduce problems arising from food waste from the start.

The mean score for 'attitude to reusing' was moderate (M=3.17, SD=0.64). This was because the attitude of hoteliers to reusing food was influenced by the strict hotel policy regarding the maximum time food could be left on the buffet line. The policy is that food items should not be left on the buffet line for more than four hours (Papargyropoulou et al., 2016). Usually, breakfast leftover food cannot be served again for lunch and would have to be disposed of for reasons relating to safety and hygiene. Even though the policy's aim was to ensure that the food served was fresh and harmless for the customers, it generated buffet leftover waste (Pirani & Arafat, 2015). In fact, leftover foods could be reused to prepare other foods but it depended on the type of food, packaging and storing. For example, certain foods that have a greater proportion of water, or foods that have been handled cannot be reused because they would spoil faster.

The mean score for 'attitude to energy recovery for reducing food waste' was also moderate (M=3.66, SD=0.64). This means hoteliers still have reservations about future plans to make food waste into a useable form of energy such as electricity, heat or transportation fuels (e.g. diesel). Kumaran, et al. (2011) found that approximately 78.5% of wasted cooking oil collected in Langkawi has the potential to be used for producing biodiesel with high yield percentage.

Finally, the mean score for 'attitude to composting' and 'attitude to disposal' was high, with M=3.69, SD=0.64 and M=3.71, SD=0.66, respectively. This indicates that the hoteliers realise the benefit of composting as a sustainable way of using disposed food waste to maintain the green image of their businesses. Besides that, the activity of composting could sustain soil conditions that would be cheaply available for landscaping purposes. According to Sandaruwani and Gnanapala (2016) hotels in an island produce more food waste because the huge strain on foodstuff resources is consistent with increase in tourist arrivals

on the island. Most of the food waste from hotels is likely to be recycled into fertilisers through composting activities (Majid, 2007). The Environment Protection Agency (2010) found that the composting systems at hotels have the ability to reduce 44% of waste costs. A study by Mishra (2016) found that 74% of Thailand hotels have been involved in food waste composting activities. However, separation of waste was required for successful composting and disposal processes. The findings of the present study suggest that hoteliers should provide sufficient training or education to encourage their staff to reduce food waste in their hotel using the waste hierarchy pyramid.

Table 4
Hoteliers' attitudes to SFWM

Construct items (n=42)	No. items	Mean	SD	Interpretation
a. Attitude to **prevention** of food waste	5	4.06	0.68	High
b. Attitude to **reusing** food	5	3.17	0.64	Moderate
c. Attitude to **composting** food waste	5	3.69	0.64	High
d. Attitude to **Energy Recovery** from food waste	5	3.66	0.66	Moderate
e. Attitude to **disposal** of food waste	5	3.71	0.66	High

*Five-point Likert type scale (1=strongly disagree, and 5=strongly agree); M=Mean, SD=Standard Deviation. *Source:* Author, 2016

Relationship between Knowledge and Attitude

The relationship between knowledge about and attitude towards SFWM is significant. This is because the inter-correlation analysis shows a strong correlation between knowledge and attitude (r=0.769). The positive relationship indicates that in the study population, the knowledge that hoteliers had on food waste management influenced their attitude to sustainable food waste management. Knowledge is an important step in changing behaviour. However, knowledge alone is insufficient to change behaviour, the right attitude is required to bring about the desired behaviour in the long run. Previous studies have shown that having knowledge is not always consistent with adopting the desired attitude, those who have sufficient knowledge will not necessarily change their attitude to waste management (Aminrad et al., 2013; Refsgaard & Magnussen, 2009). In contrast, in Udomporn (2015)'s study, even though the level of waste management knowledge was moderate, their attitude level was high. The present findings also support the results of studies conducted by Adeolu and Enesi (2014); Mustafa and Yusoff (2011) that found a strong correlation between knowledge and attitude towards SFWM. An adequate knowledge would be the driving force for changing attitudes towards SFWM and vice versa.

CONCLUSION

Briefly, the different levels of education and types of position of hoteliers correlate positively with the level of knowledge and attitude to SFWM in hotels. However, no significant correlation was found between gender, age and experience with the level of knowledge and attitude to SFWM in hotels. The key findings from this study indicated a lack of concern in hotel policy for food wastage, in which influenced the knowledge and attitude towards sustainable food waste management, particularly to reuse quality leftover food. Most of the hoteliers strictly follow hotel policy regarding food safety standards but they feel the policy is inadequate in expressing concern about food waste reduction. Based on this finding, hoteliers need firstly to seriously consider improving current food waste management policy with clear objectives, procedures, and goals towards reduction of food waste, while still protecting food safety standards and hygiene requirements. The overall hotel policy must be balanced and holistic to consider the process of food waste management from purchasing to disposal.

Secondly, hoteliers' need to think more seriously about providing innovative action in managing unsustainable food consumption patterns of customers. The innovative action taken could consist of proactive steps to achieve SFWM that takes into account their customers' different cultural backgrounds, and their personal preferences. Reducing the amount of food waste is crucial in developing a sustainable food waste management. In other words, food waste could be minimized effectively if the hoteliers truly apply the concept of green and sustainable practices for each of the activities carried out related to food waste. The scope of this paper is limited to the assessment of knowledge and attitude of hoteliers' towards food waste management in Langkawi, Malaysia. Further research could examine the knowledge and attitude of hotel guests in an effort to reduce food waste in an integrated and holistic manner.

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REFERENCES

Adeolu, A. T., & Enesi, D. O. (2014). Assessment of secondary school students ' knowledge, attitude and practice towards waste management in Ibadan , Oyo State , Nigeria. *Journal of Research in Environmental Science and Toxicology*, *3*(5), 66–73.

Akbar, A., Alavi, N., Goudarzi, G., & Teymouri, P. (2015). Household recycling knowledge, attitudes and practices towards solid waste management. *"Resources, Conservation & Recycling," 102*, 94–100. http://doi.org/10.1016/j.resconrec.2015.06.014

Alexander and Sarah. (2002). Green hotels: Opportunities and resources for success. *Journal of Management*, *8*(April), 691–699. http://doi.org/10.1300/J149v08n02

Aminrad, Z., Zarina, S., Sayed Zakariya, B., Hadi, A. S., & Sakari, M. (2013). Relationship Between Awareness, Knowledge and Attitudes Towards Environmental Education Among Secondary School Students in Malaysia. *World Applied Sciences Journal*, *22*(9), 1326–1333. http://doi.org/10.5829/idosi.wasj.2013.22.09.275

Anual Report LADA Langkawi. (2014).

Azjein,I.& Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.

Bernama. (2016). *Langkawi Akan Jadi "Pulau Rendah Karbon" Pertama Malaysia - PM*.

Environment Protection Agency. (2010). *Case Studies of Organisations Managing Food Waste Properly*. Retrieved March 10, 2017, from http://www.envirocentre.ie/includes/images/Case-Studies-of-Organisations-Managing-Food-Waste-Properly.pdf

Fariz, A. M., Shaharudin, I., & Abdul, S. H. (2017). Challenges of urban space for sustainable solid waste management in the Langat Basin. *International Journal of the Malay World and Civilisation (Iman), 5*(1), 59–66. http://doi.org/http://dx.doi.org/10.17576/IMAN-2017-05SI1

Hakim, S. A, Mohsen, A., & Bakr, I. (2014). Knowledge, attitudes and practices of health-care personnel towards waste disposal management at Ain Shams University Hospitals, Cairo. *Eastern Mediterranean Health Journal = La Revue de Sante de La Mediterranee Orientale = Al-Majallah Al-Sihhiyah Li-Sharq Al-Mutawassit*, *20*(5), 347–54. Retrieved March 10, 2017, from http://www.ncbi.nlm.nih.gov/pubmed/24952293

Halim, S. A., Komoo, I., Salleh, H., & Omar, M. (2011). The Geopark as a potential tool for alleviating community marginality: A case study of Langkawi Geopark , Malaysia. *The International Journal of Research into Island Cultures*, *5*(1), 94–113.

International Tourism Partnership. (2014). *Know How Guide To Reducing and Managing Food Waste in Hotels*. Retrieved March 10, 2017, from http://www.greenhotelier.org/know-how-guides/reducing-and-managing-food-waste-in-hotels/

Kallbekken, S., & Sælen, H. (2013). "Nudging" hotel guests to reduce food waste as a win–win environmental measure. *Economics Letters*, *119*(3), 325–327. http://doi.org/https://doi.org/10.1016/j.econlet.2013.03.019

Kasimu, a. B., Zaiton, S., & Hassan, H. (2012). Hotels involvement in sustainable tourism practices in Klang Valley, Malaysia. *International Journal of Economics and Management*, *6*(1), 21–34.

Khun. (2011). *The Coral Bay Hotel: Case Study on Phuket Island*. Retrieved March 10, 2017, from https://ecampus.itcilo.org/pluginfile.php/13681/mod_page/content/24/hotel1.pdf

Kumaran, P., Mazlini, N., Hussein, I., Nazrain, M., & Khairul, M. (2011). Technical feasibility studies for Langkawi WCO (waste cooking oil). *Energy*, *36*(3), 1386–1393. http://doi.org/10.1016/j.energy.2011.02.002

Li, Z., Lu, H., Ren, L., & He, L. (2013). Experimental and modeling approaches for food waste composting: A review. *Chemosphere*, *93*(7), 1247–1257. http://doi.org/10.1016/j.chemosphere.2013.06.064

Maired C., Dermont, C., & James H. (2010). *Less Food Waste More Profit.* Rossa Avenue, Cork, Ireland: *Clean Technology Centre, Cork institute of Technology* (p. 32). Retrieved March 10, 2017, from https://www.foodwaste.ie/web-images/Food-Waste-Prevention-Guide.pdf

Majid, M. R. (2007). Sustainable solid waste management for island resorts: Potential for Perhentian Island, Terengganu. In *International Conference on Built Environment in Developing Countries* (p. 16)*, Pulau Pinang, Malaysia.*

Mustafa, H., & Yusoff, R. M. (2011). Measuring the long-term effectiveness of a compulsory approach to behaviour change. *Journal of Education for Sustainable Development*, *5*(2), 233–244. http://doi.org/10.1177/097340821100500213

Pallant, J. (2005). *SPSS Survival Manual. A step by step guide to data analysis using SPSS for Windows (version 12)*. Open University Press: London.

Papargyropoulou, E., Wright, N., Lozano, R., Steinberger, J., Padfield, R., & Ujang, Z. (2016). Conceptual framework for the study of food waste generation and prevention in the hospitality sector. *Waste Management*, *49*, 326–336.

Pirani, S. I., & Arafat, H. A. (2015). Reduction of food waste generation in the hospitality industry. *Journal of Cleaner Production*, *132*, 129-145.

Refsgaard, K., & Magnussen, K. (2009). Household behaviour and attitudes with respect to recycling food waste - experiences from focus groups. *Journal of Environmental Management*, *90*(2), 760–771.

Rezai, G., Hosseinpour, M., & Shamsudin, M. N. (2015). Effects of go-green campaigns on changing attitude towards green behaviour. *Journal of Social Sciences & Humanities*, *23*, 77–92.

Sahabat Alam Malaysia. (2017, August 22). Waste dumping affect beauty of Pulau Langkawi – New Straits Times.

Samdin, Z., Bakori, K. A., & Hassan, H. (2012). Factor influencing environmental management practices among hotels in Malaysia. *International Journal of Social, Education, Economic and Management Engineering*, *6*(5), 5–8.

Sandaruwani, J. A. R. C., & Gnanapala, W. K. A. C. (2016). Food wastage and its impacts on sustainable business operations: A study on Sri Lanka tourist hotels. *Procedia Food Science*, *6*, 133–135.

Saraswathy K., Fariz. A. M., & Sharina A. H. (2017). Sustainable food waste management in hotels: Case study Langkawi Unesco Global Geopark. *Planning Malaysia Journal, 15*(4), 57–68. http://dx.doi.org/10.21837/pmjournal.v15.i4.317

Resource Efficient Scotland. (2013). *Managing food waste in the hospitality and food service industry.* Resource Efficient Scotland: Sterling, UK.

Seng, B., Hirayama, K., Katayama-Hirayama, K., Ochiai, S., & Kaneko, H. (2013). Scenario analysis of the benefit of municipal organic-waste composting over landfill, Cambodia. *Journal of Environmental Management*, *114*, 216–224. http://doi.org/10.1016/j.jenvman.2012.10.002

Shamshiry, E., Nadi, B., Bin Mokhtar, M., Komoo, I., Saadiah Hashim, H., & Yahaya, N. (2011). Integrated Models for Solid Waste Management in Tourism Regions: Langkawi Island, Malaysia. *Journal of Environmental and Public Health*, *2011*, 1–5. http://doi.org/10.1155/2011/709549

Sustainable Restaurant Association. (2010). *Just too good to waste. Restaurant Food Waste Survey*

Report. London.

Tatlonghari, R. V., & Jamias, S. B. (2010). Village-level knowledge, attitudes and practices on solid waste management in Sta. Rosa City, Laguna, Philippines. *Journal of Environmental Science and Management, 13*(1), 35-51.

Tan, S.-A. (2017). Hotel recycles 500kg of food waste into fertiliser within 24 hours using food-waste digester. *The Straits Times Singapore*, p. 1.

Tan, K. C., Lyman, S.B. and Wisner, J. D. (2002). Supply chain management: A strategic perspective. *International Journal of Operation & Production Management*, *22*(6), 614–631.

Udomporn, T. (2015). Resident's knowledge, attitude and practice towards solid waste management in Joho Sub-district administrative organization, Mueang district, Nakhon Ratchasima, Thailand. *International Journal of Technical Research and Applications*, *24*(24), 2320–8163.

Yusof, N. S. H. C., Yap, B. W., Maad, H. A., & Hussin, W. N. I. W. (2016). Relationship between emotional intelligence and university students' attitude. *Journal of Social Sciences & Humanities*, *24*, 119–130.

Effects of Obesity in Labour Market Outcomes: Evidence from Malaysia

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ABSTRACT

With the aims to shed light on the relationship between obesity and labour market outcomes in Malaysia, the ordinal regression model was applied on the collected questionnaires. The result from the three models suggests that employers do not consider workers' appearance and gender when they employ workers. After all, they are more concern about performance, education background and age when recruiting their ideal staff member. Even though this study fails to prove the existence of discrimination which has led to lower wages among Malaysians, the result of this study has proven that obese workers receive unfavorable treatment. Since the prevalence of obesity among Malaysian adults is substantial, the outcome of this study is crucial as it gives comprehensive information on the impact of obesity on the labour market outcome in Malaysia. The information from this study may help the authorities how to develop activities and programs in fighting obesity and how to encourage Malaysian to maintain healthy lifestyle.

Keywords: Income, labour market outcome, Malaysia, obesity, ordinal regression

INTRODUCTION

Previously, plus size body is preferable since many jobs require demanding physical activities such as the heavy and tough tasks in agriculture sector. However, today, labour market structure has immensely changed where job requirements are less focused on physical exertion, which means plus size body is less preferable. For instance, for an office job, bigger body size do not have significant impact on productivity

(Sharifzadeh, 2013). In fact, a high level of Body Mass Index (BMI) always shows a direct relationship with productivity loss (Gates, Succop, Brehm, Gillespie, & Sommers, 2008; Park, 2009). Productivity loss among obese workers can occur as a result of injury at workplace and time needed to recover is longer compared to workers with normal weight. Furthermore, they are likely to increase the demand for support services and disability management since the obese condition are limiting their basic physical abilities (Borak, 2011).

As a profit- oriented firm, productivity loss will lower company's revenue and to mitigate such problem, employers are less likely to employ obese workers if they are given the choice. Slack can occur with increasing number of sick days, low productivity and accelerating burden of medical cost lead to negative perception of employers on the obese workers. In another perspective, it seems like the firms are penalized in terms of high health care cost and employees' unhealthy habits. Thus, obesity may be associated with high unemployment rate and in some cases, obese employees in certain job position would have to accept lower wages. Therefore, the effect of obesity on the labour market will be high unemployment rate and the probability of getting lower wages (Han, Norton, & Powell, 2011).

Another negative impact of obesity is the likelihood of discrimination by peers based on their appearances (Baum & Ford, 2004). Although Becker (1957) mentioned in his taste discrimination model,

discrimination happened when employers took into consideration of race, gender and age. It will cause employers to prefer workers according to races but not their appearances. Obese workers are generally labelled as someone lacking in self-control, lazy and unintelligent, although, in actual fact, there are no differences between obese and non-obese workers in term of their ability, performance and personality. When gender is taken into consideration, the effect of obesity on wages differs between male and female, with the obese female being discriminated with lower earnings compared with non-obese counterparts (Caliendo & Lee, 2003; Judge & Cable, 2011). They are more likely to end up with low pay jobs such as in nursing care or health care centers. On the other hand, their non-obese counterparts are getting high pay customer related jobs which require attractive personality such as the sales and customer relationship representatives (Nickson, Timming, Re, & Perrett, 2016).

MATERIALS AND METHOD

This cross-sectional study involved a random sample of 533 individuals aged 20-59 years old. The sample size was determined based on the data obtain from Department of Statistics, Malaysia. The total working population of Malaysian in this category is approximately 12 million (Department of Statistics, 2015) and to obtain an accurate sample size, this study will use Krejcie & Morgan sampling technique. By applying this technique, the accurate sample size set for the study is

384, taking into consideration that as the population increases, the sample size will rise at a decreasing rate.

In this study, the response variable Y has 3 categories, namely, the low, middle and high-income groups. However, there is no standardized definition of low income, middle income and high-income group in Malaysia. The Ministry of Finance (MOF), Malaysia defined low-income group as those who earned monthly income of RM 2000 and below but there are contentious *debate* amongst academia, businesses and society on the differences of the income level among rural and urban areas (MOF, 2013). Income comprises basic wages including traveling allowance, accommodation, food supply, fuel, electricity, water and medical care (Salaries & Wages Survey Report, 2015). The corresponding dependent variables take the value; $y_i = (1, 2…. n)$.

Therefore,

$Y_1 = 1$ if the income level starts from RM0 to RM2500,

$Y_2 = 2$ if the income level starts from RM2501 to RM7000,

$Y_3 = 3$ if the income level start from RM7001 and above.

Meanwhile, the independent variables (n) represent other socioeconomic and demographic characteristics $X = (X_1, X_2, …X_n)$.

$$\text{Logit } [P (Y \leq j \mid x) = \alpha j + \beta_1 ENG_i + \beta_2 ATT_i + \beta_3 PER + \varepsilon_i \tag{1}$$

$$\text{Logit } [P (Y \leq j \mid x) = \alpha j + \beta_1 BMI_i + \beta_2 Age_i + \beta_3 Gender_i + \beta_4 Education\ level_i + \varepsilon_i \tag{2}$$

$$\text{Logit } [P (Y \leq j \mid x) = \alpha j + \beta_1 BMI_i + \beta_2 Gender_i + \beta_3 BMI_i * Gender_i + \varepsilon_i \tag{3}$$

Model (1) above includes variables; ENG, ATT and PER which represent English, worker attitude and performance, respectively. Whereas, in Model (2), BMI, age, gender and education level of the respondents are tested. Finally, Model (3) examines BMI, gender and the interaction term between both BMI and gender are observed.

Model (1) explains the differences in income in the absence of discrimination in Malaysia labour market. Meanwhile, in Model (2), other variables will be held constant, while only BMI is varied to test whether discrimination exists in the labour market. The comparison of the result between Model (1) and Model (2) will help explain if discrimination occurs due to the size of the body. In addition, Model (3) will take into consideration of the interaction between genders across body weight. The result will further explain the income differences.

RESULTS AND DISCUSSION

After combining the data collected through

random face-to-face interviews and online questionnaires, a total of 533 sets of questionnaires were collected. As the aim of this study is to estimate the impact of obesity on the labour market, those who are not working such as homemaker and students are excluded. Finally, only 391 sets of questionnaires are found useable for the analysis. The descriptive statistics of all respondents is shown in Table 1.

Approximately, 30 respondents were underweight, 163 respondents were in the

Table 1
Descriptive statistics of all respondents

Sample (N)	Underweight (<18.49)	Normal (18.5-24.9)	Overweight (25-29.9)	Obesity (>30)	Total
Age					
20-29	17 (12.7%)	73 (54.5%)	23 (17.2%)	21 (15.6%)	134
30-39	11 (6.3%)	65 (35.1%)	49 (29.3%)	49 (29.3%)	174
40-49	2 (2.9%)	19 (27.1%)	28 (40%)	21 (30%)	70
50-59	0	6 (46.2%)	5 (38.5%)	2 (15.3%)	13
Gender					
Female	25 (8.7%)	117 (41%)	73 (26.54%)	67 (23.76%)	282
Male	5 (4.5%)	46 (42 %)	32 (29.4%)	26 (24.1%)	109
Marital status					
Single	21 (11.7%)	85 (47.2%)	41 (22.7%)	33 (18.4%)	180
Married	8 (4%)	76 (38.2%)	58 (29.1%)	57 (28.7%)	199
Divorced	1 (8.3%)	2 (16.7%)	6 (50%)	3 (25%)	12
Ethnic					
Malay	12 (5.5%)	75 (34.4%)	61 (28%)	70 (32.1%)	218
Chinese	18 (14.1%)	76 (59.4%)	25 (19.5%)	9 (7%)	128
Indian	0	7 (31.8%)	5 (22.7%)	10 (45.5%)	22
Others	0	5 (21.7%)	14 (60.9%)	4 (17.4%)	23
Monthly income					
RM 0- RM 2500	5 (7.6%)	36 (54.5%)	11 (16.7%)	14 (21.2%)	66
RM 2501- RM 7000	25 (9%)	108 (39%)	79 (28.5%)	65 (23.5%)	277
RM 7001 and above	0	19 (39.6%)	15 (31.3%)	14 (29.1%)	48
Education level					
Primary school	0	1 (25%)	1 (25%)	2 (50%)	4
Secondary school	2 (3.7%)	29 (53.7%)	12 (22.2%)	11 (20.4%)	54
Diploma	8 (22.9%)	17 (48.6%)	9 (25.7%)	1 (2.8%)	35
Degree	11 (11.1%)	46 (46.5%)	23 (23.2%)	19 (19.2%)	99
Postgraduate (Master & PhD)	9 (4.5%)	70 (35.2%)	60 (30.15%)	60 (30.15%)	199

category of normal weight and finally, 198 respondents were overweight or obese persons. The total respondents were divided into 4 age groups which range from 20-29, 30-39, 40-49 and 50-59 years old. Approximately, 34% of the respondents were between 20-29 years old, 174 respondents aged between 30-39 years old and 83 of them aged 40 and above. Women dominated the survey with 72.12%.

Slightly, over half (50.9%) of the respondents are married followed by the next largest group of single respondents, with 180 people (40.1%). The numbers of divorced respondents in this study are relatively low which only 12 people. On the other hand,

around 16.9% respondents are earning monthly income in the category between RM 0 - RM 2500 and 48 respondents are earning above RM 7001.

Information on the education status indicated that out of 391 respondents interviewed, 4 respondents had at least completed primary education, 54 respondents had completed their basic education, 9% respondents had gone through diploma studies and 76.2% were educated up to tertiary level. Surprisingly, about 199 of the respondents had qualification at the masters or doctoral level.

In questionnaires, the results were tested for their validity and reliability, where the

Table 2
Reliability and factor analysis

Variable	Cronbach's alpha	Kaiser-Meyer-Olkin (KMO)
Positive attitude	0.822	0.888
Worker's performance	0.752	0.869
Importance of English	0.866	0.855

reliability test and factor analysis were performed. Three variables were included; positive attitude, worker's performance and the importance of English were tested. The Cronbach's alpha obtained for the variables in Table 2 are above 0.7 which indicated the presence of internal consistency among the items in the scale (constructs or domains), following George and Mallery (2003) rules of thumb.

On the other hand, to test sampling adequacy, the KMO test was performed and the results are above 0.8 which are acceptable

and the samples are adequate following Kaiser (1974) rule of thumb. As the sample size is more than 300 respondents, thus, the adequacy of the sampling drawn for this study is generally acceptable. Although there is no standardized minimum sample size for factor analysis, it is a universal agreement that factor analysis is inappropriate when the sample size is below 50 (Kadam & Bhalerao, 2010).

The result is further explained in the below Table 3. First, with the purpose to determine whether the final model

improves the ability to predict the outcome, a comparison between models without explanatory variables against the model with all the explanatory variables was performed. Based on the model fitting information, the *p* values for both Model 1 and 2 are less than 0.05 which indicates rejection of the null hypothesis that the model without predictors is as good as the model with the predictors. The final model gives a significant improvement over the baseline intercept-only model. Unlike Model 1 and 2, Model 3 failed to reject the null hypothesis which indicates the model without predictors is as good as the model with the predictors.

Secondly, the Pearson and Deviance goodness of fit test were performed to compare the goodness of fit measures. These statistics are intended to test whether the observed data are consistent with the fitted model. As the observed significance level is large, the null hypothesis is accepted, the data and the model prediction are similar; thus, indicating both models are good

Third, in traditional OLS model, R^2 is obtained to summarize the proportion of variance in the outcome that can be accounted for the explanatory variables. In other words, large R^2 values suggested that the greater number of variations in the outcome was explained. Nevertheless, for the ordinal regression model, there are three pseudo R^2 values being computed instead of relying on one R^2. The three Pseudo R^2 values are relatively lower at 6.7%, 8.4% and 4.3% for Model 1. This suggests that

the positive attitude, performance and application of English explained a relatively small proportion of the variation between workers and their income. The outcome is expected as there are numerous factors which contribute to the difference in income level. Meanwhile, for Model 2, the three Pseudo R^2 values are higher than both Model 1 and 3. Although the Pseudo R^2 remains low, this does not negate the fact that there is statistically significant contribution of age and education level to income and reflex differences in income level.

Fourth, since the ordered logit model estimates one equation over all levels of the response variable; testing of Parallel Lines is required to compare the ordinal model which has one set of coefficients for all thresholds against the model with a separate set of coefficients for each threshold. The result indicated that the proportional odds assumption appears to have hold because the significance of the Chi-Square statistic is 0.092, 0.307 and 0.153 which is greater than 0.05. Thus, the intercepts in the equations may vary, but the parameters would be identical for each model.

Since the i) dependent variable is ordinal, ii) independent variables are in continuous, ordinal or categorical, iii) there is no multicollinearity detected as VIF < 10, IV) proportional odds assumption is met, the data will be analysed using ordinal regression.

Based on the parameter estimation, only performance is statistically significant affecting monthly income for Model 1.

Table 3
Ordinal regression result

		Model 1	Model 2	Model 3
Model fitting information		0.000*	0.001*	0.314
Goodness of fit				
Pearson		0.478	0.227	0.315
Deviance		1	0.943	0.153
Pseudo R2				
Cox and Snell		0.067	0.267	0.021
Nagelkerke		0.084	0.337	0.026
McFadden		0.043	0.195	0.013
Test of Parallel		0.092	0.307	0.153
Parameter				
Threshold				
	1	2.141 (0.653 to 3.630)	4.965 (2.058 to 7.872)	-1.215 (2.022 to 0.408)
	2	5.920 (4.300 to 7.540)	9.636 (6.583 to 12.689)	1.568 (1.568 to 3.264)
Variables				
Attitude		-0.050 (0.342 to 0.441)		
Performance		0.806*(0.323 to 1.288)		
English		0.160 (-0.120 to 0.440)		
BMI				
	2		0.027 (0.856 to 0.909)	
	3		-0.040 (0.984 to 0.904)	
	4		-0.081 (-1.044 to 0.880)	
Age				
	2		1.476*(0.845 to 2.106)	0.029 (0.820 to 0.920)
	3		2.833*(2.014 to 3.653)	0.763 (0.183 to 1.710)
	4		3.664*(1.965 to 5.363)	0.600 (-0.363 to -1.565)
Male			0.6786 (0.150 to 1.208)	-0.153 (2.100 to 1.794)
Education level				
	2		3.508 (0.772 to 6.244)	
	3		4.927*(2.096 to 7.757)	
	4		5.963*(3.133 to 8.793)	
	5		6.300*(3.481 to 9.120)	
BMI*Gender				
2	2			0.632 (-1.458 to 2.721)
3	2			0.124 (-2.029 to 2.277)
4	2			0.159 (-2.037 to 2.343)

*significant at 0.05 level

One unit increase in performance will lead to 0.805% increases in the log odds 95% (CI 0.323 to 1.288) of higher income level given that all other variables in the model are held constant. A transform of the coefficient value into the odds ratio of being in the high income versus the combined middle and low income are about 2.239 times 95% (CI 1.150 to 2.692). Meanwhile, other variables such as English and Attitude were insignificant. Application of English in the workplace does not improve the workers gaining power which is conversely with the existing literature (Honna, 2015; Nair et al, 2012; Phan, Kho, & Ching, 2013). This might be caused by a large number of Malay respondents (56 %) participating in this study. In Malaysia, majority Malays are enrolled in the public sector (Woo, 2015). Thus, the impact of English application in workplace relative to income level is limited as the public sector is often in favour of enhancing the status of Malay language instead of English. The civil servants' salary scheme is rather sticky due to the influence of seniority and education background compared to the importance of fluency in English (Suruhanjaya Perkidmatan Awam, 2015).

In addition, the positive attitude failed to explain the sources of differences in income. Having positive attitude such as always come to work on time and willing to stay back after office hour to finish incomplete tasks do not ensure better income. This is because, in Malaysia; the standard appraisal is usually done annually and therefore, the workers should consistently remain positive in the workplace with the hope that reward is granted.

On the other hand, with the intention to examine the probability of getting different income level from various BMI categories, the BMI were restricted to four levels following WHO cut-off points. The result seems to contradict with the existing literature (Garcia & Quintana Domeque, 2009; Johansson, Bockermen, Kiiskinen, & Heliovaara, 2009). It shows that the different level of BMI failed to explain the differences in income levels in Malaysia. As mentioned earlier, since the respondents are predominantly Malays, there is high possibility that they are working as government servants and thus resulting in the sticky wages where their appearance does not affect their salary. However, in private sector, people who are physically attractive would earn more and highly likely to be seen as suitable leaders (Averett, 2014). This is because discrimination happened when employers have a negative perception that obese women tend to have a limited self-control than women who have a moderate weight. Employers often associate obesity with laziness, dishonesty and demotivation. Thus, in Malaysia labour market, employers are looking into performance, education level and age in any pay raise decision.

However, from the individual personal perceptive, a few respondents were among those with BMI above 30 answered the

relevant questions in the questionnaires to verify the existence of discrimination. Out of 93 obese participants, around 30% of the participants agreed that body weight limits their ability in all kinds of job. Approximately 50% of the participants claimed their jobs involve sedentary work and low mobility. While, 63% of the participants felt they are treated differently due to their body weight. In addition, 73

of them claimed that their supervisors will take into consideration of their weight in delegating job assignment. Overall, some of the respondents feel that body weight does affect their profession and make them less productive compared to others.

As shown in Table 4, the odds of older age group (Category 4) getting higher income was 3.664* 95% (CI 1.965 to 5.363) times compared to another age

Table 4
Odds ratio

		Model 1	Model 2	Model 3
Parameter				
Threshold				
	1	2.141 (0.653 to 3.630)	4.965 (2.058 to 7.872)	-1.215 (2.022 to 0.408)
	2	5.920 (4.300 to 7.540)	9.636 (6.583 to 12.689)	1.568 (1.568 to 3.264)
Variables				
Attitude		1.051 (0.710 to 1.555)		
Performance		1.381*(1.381 to 3.627)		
English		1.174 (0.887 to 1.553)		
BMI				
	2		1.027 (0.425 to 2.482)	1.029 (0.422 to 2.510)
	3		0.960 (0.373 to 2.469)	2.147 (0.832 to 5.534)
	4		0.921 (0.352 to 2.412)	1.823 (0.695 to 4.781)
Age			1.476*(0.845 to 2.106)	
	2		2.833*(2.014 to 3.653)	
	3		3.664*(1.965 to 5.363)	
	4			
Male			0.6786 (0.150 to 1.208)	0.858 (0.122 to 6.018)
Education level				
	2		3.508 (0.772 to 6.244)	
	3		4.927*(2.096 to 7.757)	
	4		5.963*(3.133 to 8.793)	
	5		6.300*(3.481 to 9.120)	
BMI*Gender				
2	2			1.880 (0.232 to 15.204)
3	2			1.132 (1.852 to 9.749)
4	2			1.165 (1.303 to 10.417)

*significant at 0.05 level

group, a statistically significant effect, Wald $\chi^2(1) = 4.23$, $p = 0.000$. Older workers are expected to be experienced, knowledgeable and skilled compare to their younger counterparts and they are at greater income level. Meanwhile, the contribution of gender to the various income levels is undefined. The result was consistent with the Salaries & Wages Survey Report where the mean difference across gender are only RM91 (Department of Statistics, 2015). Whereas, the odds of degree holder (Category 4) getting higher income was 5.963* 95% (CI 3.133 to 8.793) times compared to those with other education level, a statistically significant effect, Wald $\chi^2(1) = 4.13$, $p = 0.000$. Similarly, the odds of Master and PhD holder (category 5) getting higher income was 6.300* 95% (CI 3.481 to 9.120) times compared to another education level, a statistically significant effect, Wald $\chi^2(1) = 4.13$, $p = 0.000$. Thus, workers with at least tertiary education performed better in the labour market (better rewards in term of salary) compared with workers who have basic education (primary and secondary education) and this finding is supported by Sandy Baum (Baum, 2014).

Comparatively, Model 3 examines the effect of various BMI level across gender to the multiple income levels. It is tested by adding an interaction term to the model in which the two predictor variables, BMI and gender are multiplied. Unlike other researches which have made significant contribution across gender in obesity and overweight worker to wages, Model 3 suggests that there is no evidence to support

the fact that BMI has led to discrimination thus resulting in lower wages in Malaysia.

Next, the predicted probability will be computed for each category of the dependent variable for Model 1 and 2. The ordinal logit model estimates a score "P" as a linear function of attitude, performance and English (Model 1) is equal to:

P1 = $2.141 - 0.050\ X_1 + 0.805\ X_2 + 0.160X_3$

P2 = $5.920 - 0.050\ X_1 + 0.805\ X_2 + 0.160X_3$

S = $-0.050\ X_1 + 0.805\ X_2 + 0.160X_3$

P (ordinal= "low income") = $P (S + u \leq\_ cut1) = P (S + u \leq 2.141)$

P (ordinal= "middle income") = $P (cut1 < S + u \leq cut2) = P (2.141 < S + u \leq 5.920)$

P (ordinal= "high income") = $P (cut2 < S + u) = P (5.920 < S + u)$

Therefore, for all average values, the probability of being in the low income group is 15%, middle income group 73%, and high income group is 12% in Model 1. Likewise, the ordinal logit model estimates a score "P" as a linear function of BMI, Age, Education level and Gender (Model 2) is presented below:

P1 = $4.965 + 1.027\ X_1 + 0.960\ X_2 + 0.921X_3 + 1.476\ X_4 + 2.833\ X_5 + 3.664X_6 + 0.679\ X_7 + 3.508X_8 + 4.927\ X_9 + 5.963\ X_{10} + 6.300X_{11}$

P2 = $9.636 + 1.027\ X_1 + 0.960\ X_2 + 0.921X_3 + 1.476\ X_4 + 2.833\ X_5 + 3.664X_6 + 0.679\ X_7 + 3.508X_8 + 4.927\ X_9 + 5.963\ X_{10} + 6.300X_{11}$

$$S = 1.027\ X_1 + 0.960\ X_2 + 0.921 X_3 + 1.476\ X_4 + 2.833\ X_5 + 3.664 X_6 + 0.679\ X_7 + 3.508 X_8 + 4.927\ X_9 + 5.963\ X_{10} + 6.300 X_{11}$$

P (ordinal= "low income") = P ($S + u \le$ cut1) = P ($S + u \le 4.965$)

P (ordinal= "middle income") = P (cut1 $< S + u \le$ cut2) = P ($4.965 < S + u \le 9.636$)

P (ordinal= "high income") = P (cut2 $< S + u$) = P ($9.636 < S + u$)

CONCLUSION

As obesity and overweight become a rising concern in Malaysia, the impact on the labour market is largely undefined, despite evidence from the health perspective that indicates obesity and overweight workers tend to be associated with various chronic diseases (MOH, 2011). Thus, this study has figured out the potential impact of different BMI levels particularly on obesity and overweight to the various income levels. Combining the data collection though questionnaires and face to face interviews, the ordinal regression model was applied.

The result from Model 1 suggests that performance leads to higher income level. On the other hand, based on the findings in Model 2, it has revealed that BMI and gender are unable to explain differences in income levels in Malaysia. This indicates that, employers do not consider workers' appearance and gender when they recruit workers, since they are more concern about education background and age when recruiting their ideal staff member. Age is a crucial factor in recruitment because matured workers are expected to be experienced, knowledgeable and skilled compared to their younger counterparts. Thus, workers who possess basic education (primary and secondary education) are getting lesser reward compared to workers who finished at least tertiary education.

Although BMI failed to explain differences in various income levels, obese workers participating in this study agreed that stigma does exist in Malaysia labour market. More than half of the obese respondents claimed that they were being offered inferior jobs. The respondents felt that they were treated differently due to their body weight and some asserted that their supervisors would take into consideration of their weight in delegating job assignment. Even though this study fails to prove the presence of discrimination which leads to lower wages in Malaysia labour market, to some extent, this study has shown that obese workers do receive unfavorable treatment. If the future research in this area can distinguish between private and public employees, then this will help to eliminate the sticky effect to their salary. For instance, a data set with more detail information on workers workplace environment might help to further explain the occurance of discrimination.

REFERENCES

Averett, S. L. (2014). World of Labor Obesity and labor market outcomes: The hidden private cost of obesity : Lower earnings and a lower probability of employment, *IZA World of Labor (May),* 1–10.

Baum, C. L., & Ford, W. F. (2004). The wage effects of obesity: A longitudinal study. *Health Economics*, *13*(9), 885–899. doi:10.1002/hec.881

Baum, S. (2014). Higher education earning premium value, variation, and trends. *Urban Institute*, 1–12. Retrieved January 9, 2017, from https://files.eric.ed.gov/fulltext/ED544781.pdf

Borak, J. (2011). Obesity and the workplace. *Occupational Medicine*, *61*(4), 220–222. doi:10.1093/occmed/kqr030

Caliendo, M., & Lee, W. S. (2013). Fat chance! Obesity and the transition from unemployment to employment. *Economics and Human Biology*, *11*(2), 121–33. doi:10.1016/j.ehb.2012.02.002

Department of Statistic. (2015). Department of Statistics Malaysia Press Release. *Department of Statistics Malaysia*, (June), 5–9. doi:10.1017/CBO9781107415324.004

Department of Statistics. (2015). Salaries & Wages Report. Kuala Lumpur.

Garcia, J. (2006). Obesity, employment and wages in Europe. *The Economics of Obesity (Advances in Health Economics and Health Services Research), 17*,187-21.

Gates, D. M., Succop, P., Brehm, B. J., Gillespie, G. L., & Sommers, B. D. (2008). Obesity and presenteeism: The impact of body mass index on workplace productivity. *Journal of Occupational and Environmental Medicine / American College of Occupational and Environmental Medicine*, *50*(1), 39–45. doi:10.1097/JOM.0b013e31815d8db2

Greve, J. (2008). Obesity and labor market outcomes in Denmark. *Economics and Human Biology*, *6*(3), 350–362. doi:10.1016/j.ehb.2008.09.001

Han, E., Norton, E. C., & Powell, L. M. (2011). Direct and indirect effects of body weight on adult wages. *Economics and Human Biology*, *9*(4), 381–392. doi:10.1016/j.ehb.2011.07.002

Härkönen, J., Räsänen, P., & Näsi, M. (2011). Obesity, unemployment, and earnings. Old site of *Nordic Journal of Working Life Studies*, *1*, 23–38.

Honna, N. (2005). English as a multicultural language in Asia and intercultural literacy. *Intercultural Communication Studies*, *14*(2), 73–89.

Johansson, E., Böckerman, P., Kiiskinen, U., & Heliövaara, M. (2009). Obesity and labour market success in Finland: The difference between having a high BMI and being fat. *Economics and Human Biology*, *7*(1), 36–45. doi:10.1016/j.ehb.2009.01.008

Judge, T. A., & Cable, D. M. (2011). When it comes to pay, do the thin win? The effect of weight on pay for men and women. *The Journal of Applied Psychology*, *96*(1), 95–112. doi:10.1037/a0020860

Ministry of Health Malaysia. (2011). Management of dyslipidemia, clinical practice guideline (4th ed.). Malaysia: Ministry of Health Malaysia.

Nair, G. K. S., Rahim, R. A., Setia, R., Husin, N., Sabapathy, E., Jalil, N. A. A., … Seman, N. A. (2012). Malaysian graduates English adequacy in the job sector. *Asian Social Science*, *8*(4), 143–147. doi:10.5539/ass.v8n4p143

Nickson, D., Timming, A. R., Re, D., & Perrett, D. I. (2016). Subtle increases in BMI within a healthy weight range still reduce womens employment chances in the service sector. *PLoS ONE*, *11*(9), 1–14. doi:10.1371/journal.pone.0159659

Park, J. (2009). Obesity on the job. *Perspectives on Labour and Income*, *10*(2), 14–22.

Phan, L. H., Kho, J., & Ching, B. (2013). Nation building, English as an international language, medium fo instruction and language debate: Malayisa and possible ways forward. *Journal of International and Comparative Education*, *2*(2), 58–71.

Sharifzadeh, M. (2013). Does Fitness and Exercises Increase Productivity? Assessing Health, Fitness and Productivity Relationship. *American Journal of Management*, *13*(1), 32-52.

Suruhanjaya Perkidmatan Awam. (2015). Annual Report 2015. Kuala lumpur.

Woo, K. H. (2015). Recruitment practices in the Malaysian public sector: Innovations or political responses? *Journal of Public Affairs Education*, *21*(2), 229–246.

SOCIAL SCIENCES & HUMANITIES

Gender Differences in Consumer Shopping Styles in India

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ABSTRACT

The purpose of this study was to investigate the differences in the shopping styles and buying behaviour of male and female Indian consumers. The research used the Sproles and Kendall (1986)'s Consumer Style Inventory (CSI) on a sample of 166 men and 98 women. T-test revealed that there are significant differences in the decision making styles among male and female consumers, constituting of 5 factors namely, Perfectionism; Novelty & fashion consciousness; Store loyalty & store image consciousness; Impulsive & carelessness and the Harried shopper. The second objective of the study was to validate the 8 original CSI factors in an Indian context. Exploratory factor analysis was used to analyse and understand the differences in decision-making styles of male and female consumers. The study identified 12 common factors for male and female consumers. Out of the 12 factors, 4 new traits emerged. They slightly vary from the 8 original CSI factors. These 4 new traits are i) Quality Consciousness; ii) Brand loyalty; iii) Store loyalty and store image consciousness and iv) Variety seeking factors. On separately analysing the data pertaining to men and women, 8 and 9 factors respectively emerged, indicating certain differences. They provide new insights into their decision making styles. Our research identified a new factor called ' harried shopper', indicating that shoppers make choices in a hurry when pressed for time. Implications and directions for future research are provided based on the results.

Keywords: Consumer decision making, Consumer Style Inventory, gender

INTRODUCTION

"Indian consumer segment is broadly segregated into urban and rural markets and is attracting marketers from across the world. The sector comprises of a huge middle class, relatively large affluent class and also the economically disadvantaged class, with spending anticipated to more than double by 2025. India hit ten-year

high and stood first among the 63 nations surveyed in the global consumer confidence index with a score of 136 points for the quarter ending December 2016. Further, in the discretionary spending category, 70% respondents from India indicated the next 12 months as being good to buy, thus ensuring once again that India leads the global top 10 countries for this parameter during the quarter ("Indian Consumer Market," 2017). With these developments, it is pertinent for practitioners' and researchers to understand the decision-making styles of Indian consumers and the difference that gender may cause in shopping styles, given the increased number of steadily growing double income families in India.

Everyday consumers perform various transactions to obtain goods and services through in-store or online purchases. Consumers' decision making has become more challenging and complex than it was in the past (Bettman, Luce, & Payne, 1998). Consumer decision-making styles are highly correlated with consumer buying behaviour and are relevant for market segmentation through which marketers can profile their target market (Mitchell & Bates, 1998). Earlier, marketers segmented their markets based on the heterogeneity of needs and more specifically based on the demographic attributes (Wedel & Kamakura, 2000). Researchers have suggested that demographic differences could affect decision-making styles and buying preferences (Cant & Hefer, 2013; Lysonski, Durvasula, & Zotos, 1996). Demographics determine certain specialized consumer activities like shopping and buying of clothing, personal care products and electronic gadgets that are designed and promoted for either male or female consumers (Mokhlis & Salleh, 2009; Pol, 1991). The combination of decisions making styles and demographic variables provides marketers to profile, focus and to design marketing strategies for their identified target market segments (Hiu et al., 2001; Potgieter, Wiese, & Strasheim, 2013). The most popular forms of demographic variables that are used to segment the markets are age, income, gender, household income, marital status, lifestyle, life stages and ethnicity (Potgieter et al., 2013). Among these variables age, gender and income are considered to be the most important variables that determine one's decision making styles towards buying products and services (Mokhlis & Salleh, 2009). Marketing researchers have argued that the gender and income-based segmentation provides clear identification and easy access to the target segments (Darley & Smith, 1995; Meyers-Levy & Sternthal, 1991). In addition to these, further studies have proved that gender has a significant relation with the consumers' attitudes, purchase decisions and buying behaviour (Bakewell & Mitchell, 2006; Fischer & Arnold, 1994; Van Slyke, Comunale, & Belanger, 2002). Therefore, many researchers stress that gender is an important factor that determines consumer needs, wants and buying behaviour and is a "fundamental market segmentation index" (Mokhlis & Salleh, 2009, p. 575).

Studies that focus specifically on gender differences in consumer decision-making styles are sparse (Potgieter et al., 2013). Therefore, the current research focuses on studying the gender differences in decision-making styles, which could guide marketers and retailers in making marketing mix decisions by understanding the needs and preferences of male and female groups of consumers and their respective decision making styles (Mitchell & Walsh, 2004; Tai, 2005). Studies conducted in the Indian context on consumer decision making call for a better understanding of these consumers by considering individual, situational or contextual factors (Goswami & Khan, 2015; Kumar, Vohra, & Dangi, 2016; Sharma & Aich, 2012; Tanksale, Neelam, & Venkatachalam, 2014; Verma & Rangekar, 2015). Therefore, this study is an attempt to understand consumer decision making styles (CDMS) and the effects of gender on CDMS. The study also contributes to the body of consumer behaviour literature by validating the 40-item Consumer Style Inventory (CSI) developed by Sproles and Kendall (1986). Further, Zhang, Van Doom and Leeflang (2014) point out that cultural differences cause significant changes in consumer decision making styles. Hence, country or region-specific studies are essential, to better understand CDMS.

LITERATURE REVIEW

Earlier studies investigated and revealed the importance of consumer behaviour research and explained that all consumers approach shopping with certain decision-making traits. These traits form the CDMS (Bakewell & Mitchell, 2003; Bauer et al., 2006; Fan & Xiao, 1998; Gilbert, Lee-Kelley, & Barton, 2003; Hafstrom, Chae, & Chang, 1992; Jacoby & Chestnut, 1978; Kamaruddin & Mokhlis, 2003; Lysonski et al., 1996; Mitchell & Bates, 1998; Mitchell & Walsh, 2004; Potgieter et al., 2013; Solka, Jackson, & Lee, 2011; Westbrook & Black, 1985). Sproles and Kendall (1986) developed a scale consisting 40 items, called the consumer style inventory (CSI). Hanzaee and Aghasibeig (2008) studied the Generation Y male and female consumers and gender differences in their decision-making styles. The study conducted on the "differing approaches of CDMS of 386 male and female Malaysian consumers found 2 new male traits- brand loyalty and time-energy conserving and 3 female traits - recreational, shopping avoidance and price consciousness (Mokhlis & Salleh, 2009). Thus, prior studies provide convincing evidence about varied consumer decision-making styles based on gender. Meanwhile, very few studies have focused on gender differences of male and female consumers in India. Therefore, we believe that male and female consumers in India may also be different in their CDMS. This can be of equal interest to both researchers and marketing practitioners. Our study is an attempt to throw more light on the differences in the CDMS based on gender in the Indian context.

Consumer Decision-Making Styles

The decision-making process of a consumer is a process of evaluating and identifying the best alternative products, brands, and services satisfying specific needs. According to the literature, decision-making process constitutes five stages (Jacoby, Johar, & Morrin, 1998; Spawton, 1989). They are Problem Recognition, Information Search, Evaluation of Alternatives, Choosing the Product and Post Purchase Evaluation.

It is essential for the marketers to understand their consumers' purchase behavior which is linked with sales because many research studies have suggested that the consumers display certain decision-making styles and purchasing strategies consistently while engaging in shopping (Sproles & Kendall, 1986). Sproles and Kendell (1986, p. 267) defined CDMS as "a patterned, mental, cognitive orientation towards shopping and purchasing, which constantly dominated the consumer's choices and these traits were ever-present, predictable, central driving forces in decision-making". Scott and Bruce (1995) defined it as the learned habitual response pattern exhibited by an individual when confronted with a consumption decision situation. Earlier consumer literature classifies decision-making styles into three main approaches. First is the consumer typology approach, which defines the consumers' attitudes and motives in to limited number of types (Darden & Ashton, 1974). Second is the psychographics/lifestyle approach explaining a consumer's activity, interest and opinion to measure consumer personalities and predict consumer behaviour (Lastovicka, 1982). Third, the consumer characteristics approach that talks about cognitive and affective orientations (Sproles & Sproles, 1990). Sproles and Kendall (1986) developed a scale known as Consumer Style Inventory (CSI) which classified consumers according to different decision making styles. CSI consists of 40 items. The eight factors of CSI are summarized below:

- Novelty and fashion conscious consumers –These consumers seek for excitement and pleasure in new and innovative items; these consumers update themselves with the latest styles, fads, and trends.

- Perfectionism –These consumers have high expectations and seek for the best quality and functionality of the products and services.

- Confused by too many choices-These consumers find difficulty in making decisions because of diverse options and information overload.

- Recreational, hedonistic consumers –These consumers find shopping a pleasure, fun-filled and enjoyable activity.

- Impulsive consumers –These consumers who go for shopping trips casually, and are least concerned about the price and quality, but they often regret the purchases they have made.

- Habitual and brand-loyal consumers are those who are loyal and stick on with their favourite brands and shops.

- Brand-conscious consumers tend to purchase the premium and well-known brands and perceive that high priced products are better in quality. They prefer to buy products and services at specialty stores.

- Price-conscious or value-for-money seeking consumers often compare products and look for price offs and consider the lowest-priced products.

These eight factors of Sproles and Kendall (1986), were further classified into three dimensions, i) Trendy and Perfectionism, ii) Traditional and Pragmatic, and iii) Confused by Over-choice. Many researchers have used this CSI scale in order to characterise consumer segments in various contexts in different countries (Fan & Xiao, 1998; Hafstrom et al., 1992; Hanzaee & Aghasibeig, 2008; Hiu et al., 2001; Mitchell & Bates, 1998; Wicklie, 2004). For instance, Bae and Miller (2009) conducted a comparative study of decision making styles in East Asia about purchase style inventory for sport products (PSISP). They found that there was significant difference in decision-making styles among three different countries in East Asia and concluded that Japanese male and female college students exhibited higher brand consciousness than Singaporean and Taiwanese students. It was demonstrated

that only five factors of CSI inventory are valid and reliable for the Chinese market (Hiu et al., 2001). Mokhlis and Salleh (2009) examined different decision-making styles of young adults in Malaysia and found that seven factors, namely, novelty and fashion conscious consumers; the brand-conscious consumer; the perfectionism, high-quality-conscious consumer; confused by over choice consumer; the recreational, hedonistic consumer; the impulsive consumer were reliable.

Gender Differences

Many studies have stated that gender, income, and age have a significant influence towards the adoption of consumer decision making styles (Kamaruddin & Mokhlis, 2003; Potgieter et al., 2013). The gender roles and responsibilities change as men and women differ in terms of traits, information processing, decision-making and purchasing patterns (Hoyer, 1984). As the needs and wants vary, the manners in which they think about obtaining products are also different (Mitchell & Walsh, 2004). Wesley, LeHew and Woodside (2006) proved that females were more recreation-conscious, fashion-conscious and perfectionists towards shopping mall behaviour. Chen, Phelan and Jai (2016) conducted a comparative study on decision making styles and found that there were significant differences between male and female Taiwanese and American consumers across various product categories. Gilbert et al. (2003) studied Technophobia and gender and its influence on consumer decision-making towards

technology related products. They found that technology anxiety highly correlates with demographic variables such as age, gender and academic qualifications. Mitchell and Walsh (2004) identified specific traits for both genders. Women shoppers were more recreational, novelty and fashion conscious, and quality-conscious; while men are variety seeking and time-saving. Bakewell and Mitchell (2006) found that 480 young males and females had nine common decision-making traits and reported three new male traits namely, store-loyalty & low-price seeking, confused time-restricted and store-promiscuity. Unal and Ercis (2008) examined gender as a determinant of consumer decision-making styles of males and females living in Erzurum, Turkey. The study found that women tended to seek for novelty and variety, are more quality conscious and brand/company loyal. Men were found to be impulsive and felt more regretful after their unplanned shopping.

A more recent study has stated that the demographic differences in adult consumers of Tshwane, South Africa and found that females tend to engage more in recreational, novelty/fashion-conscious, and price-conscious, confused by over-choice than males (Potgieter et al., 2013). Khare, Parveen and Mishra (2012) explored the influence of demographic factors like age, income, marital status, gender, and education on online shopping consumer decision making styles. They concluded that impulsive shoppers preferred to look at the convenience of virtual shopping. Fashion conscious consumers considered

information access and availability of choices important. Brand and quality conscious shoppers were not likely to purchase online.

Many studies conducted across different parts of the world, identified gender differences in consumer decision making styles (Bakewell & Mitchell, 2006; De Oliveira et al., 2015; Hanzaee & Aghasibeig, 2008; Mitchell & Walsh, 2004; Mokhlis & Saleh, 2009; Sharma & Aich, 2012; Unal & Ercis, 2008). These studies confirmed that male and female consumers belonging to different regions had varied CDMS different from the original factors of CSI. For example, 'Time restricted' was a factor identified by Mitchell and Walsh (2004). Non-Perfectionism & brand indifference was a factor identified by Hanzaee and Aghasibeig (2008); Imperfectionism was identified by Bakewell and Mitchell (2006). The above findings indicate that studies done in various countries have yielded different factors at various points of time. Hence, CSI when is applied in the current Indian scenario, it might unearth new insights about consumer decision making styles.

Thus we propose the hypothesis, H1: Male and female consumer decision-making styles are different.

METHODS

Sample and Data Collection

This study used Sproles and Kendall (1986)'s 40-item, 5 point Likert scaled Consumer Style Inventory (CSI) for the

purpose of this study. In our study, CSI was subjected to content validity test, taking into account cultural differences based on criteria such clarity, conciseness and ambiguity (Goswami & Khan, 2015). The reliabilities of the original CSI Scale ranged from 0.48 to 0.76, according to Sproles and Kendall (1986). The questionnaire was self-administered on a convenience sample, in Vellore City, Tamilnadu, India. We approached nearly 200 respondents in public places such as supermarkets, shopping malls, restaurants considered ideal because of the nature of the study. Due to time restrictions and other limitations more than half of the approached respondents declined to participate in the survey. The researchers could obtain 84 filled in responses through this mode. Further, the survey instrument was sent by email to another 300 potential respondents. The database for this mode was already available with the researchers. We requested to send the filled in questionnaire within two weeks, with a reminder mail after one week of initial contact. At the end of three weeks, 196 responses were received indicating a combined response rate of 56 %. Along with the in person mode of data collection, the final set of usable responses totalled to be 264 in number. The total number of students who participated in the survey was 30, of which 26 students had parental support, and the remaining 4 had borrowed bank loans to support their living expenses. The students surveyed were mostly from affluent homes. 82% of the students' households had an income of more than 1.5 million Indian rupees

per annum. The mean household income in India in 2015 was about 0.48 million ("Centre for Monitoring Indian Economy", 2017). Also, these students were above the age of 19 and would soon become young adults entering the workforce. The researchers felt that including them in the study would ensure demographic diversity of the sample. Convenience sampling was used to overcome the constraints of time and budget (Ferber, 1977). Further, as per Dörnyei (2007), convenience sampling was selected for the purpose of the study in order to meet practical criteria, such as geographical proximity, availability at a particular time, easy accessibility, or the willingness of the respondent.

RESULTS AND DISCUSSION

In order to find out the set of male and female CDMS of Indians, we used exploratory factor analysis (EFA) on the data by using SPSS software (version 23) to examine and condense the items. As stated by, De Vaus (2002) "such factors are not single measurable entities but are constructs of a number of other directly observable variables. A total of 40 variables used by (Sproles & Kendall, 1986) were used to measure respondents' decision making styles. A screen test and Eigen values (> than 1.00) determined the criteria for factor extraction. Elimination of variables with factor loadings less than 0.40 led to a decrease in the number of CSI items from 40 to 36.At the end of the analysis, 12 factors were obtained, that are common to both male and females decision making

styles. These factors explain 65.954% of the total variance (Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 87%, Bartlett's Test of Sphericity: 7158.683, p<0.000).

Table 1
Demographic description of the sample

Demographic Variable	Frequency	Percentage
Gender		
Male	166	62.88
Female	98	37.12
Age		
19yrs - 29 yrs	124	46.97
30 yrs - 39 yrs	60	22.99
40 yrs - 49 yrs	46	17.42
Above 50 yrs	31	11.74
Income		
No direct income (Students)*	30	11.36
Less than 5 lakhs per annum	38	14.39
Rs.5 lakhs to Rs.10 lakhs per annum	103	39.02
Above 10 lakhs per annum	93	35.23
Occupation		
Students	30	11.36
Working Professionals	162	61.36
Self employed	34	12.87
Homemakers	38	14.39

*These students were living either through parental support or study loans borrowed from banks to meet their living expenses.

Table 2 depicts the results. 12 factors common to men and women are: i) Quality consciousness, ii) Brand consciousness, iii) Perfectionism, iv) Confused by over choice, v) Novelty-fashion consciousness, vi) Brand-loyal, vii) Store loyalty and store image consciousness, viii) Variety seeking, ix) Recreational-Hedonistic, x) Impulsive-Careless consumers, xi) Price Consciousness and xii) Harried Shopper. Seven of these factors were the same as validated in the original study using CSI (Brand consciousness, Perfectionism, Confused by over choice, Novelty-fashion consciousness, Impulsive Consumers, Recreational-Hedonistic Consumer and Price Consciousness). Factors different from the original CSI factors were Quality Consciousness; Brand loyalty; Store loyalty and Store image consciousness; Variety seeking factors. Moreover, Perfectionism, high-quality consciousness appears under the same factor in Sproles and Kendall (1986) study. However, they formed two

different factors in our study and this may be the result of gender differences. This is also confirmed in studies across countries (Chen, Phelan, & Jai, 2016; Fan & Xiao, 1998; Hafstrom et al., 1992; Hiu et al., 200; Kamaruddin & Mokhlis, 2003; Lysonski, et al., 1996; Potgieter et al., 2013).

A comparison of the present study with the previous ones (Tables 6 and 7) indicates that the initial Sproles and Kendall's eight-factor model is not entirely consistent in other countries and cultures (Sharma & Aich, 2012). Some of the factors have higher reliability in some cultures and lower reliabilities in others.

In addition, the current study and all the previous studies cited in Tables 6 & 7 have identified new factors exclusive to male and female consumers. The identification of these additional consumer traits for both genders, apart from those identified by Sproles

and Kendall , provides direct support for previous studies which concluded that the CSI with its original factors is not applicable as it is in other cultures. Therefore, taking into account the socio-cultural factors and differences caused by individual variables such as gender this instrument needs to be tested in multiple countries and revised for specific application in these countries (Tarnandinis et al., 2015; Zhang, Van Doorn, & Leeflang, 2013).

Our factor structure for 'harried shopper' has only single item. It may be due to the fact that the original CSI scale does not have enough statements on this aspect, also indicating that this dimension needs more investigation in the current scenario. However, Diamantopoulos et al. (2012) state that under particular conditions single items perform equally well as multi-item scales.

Table 2
Factors of consumer decision-making styles

Items	Factor Loadings	Eigen Value	Variance %
Factor 1: Quality Consciousness	**α= 0.91**	**7.132**	**19.675**
Getting very good quality is important for me	0.765		
In general, I try to buy the best overall quality	0.645		
I make a special effort to choose the very best quality products	0.521		
Factor 2: Brand Consciousness	**α= 0.84**	**3.247**	**11.241**
The well-known national brands are for me	0.812		
I prefer buying the best-selling brands	0.719		
The most advertised brands are usually very good choices	0.657		
Factor 3: Perfectionism	**α= 0.81**	**2.634**	**7.678**
When it comes to purchasing products, I try to get the very best or perfect choice	0.523		
I give my purchases much thought or care	0.573		
My standards and expectations for the products that I buy is very high	0.692		

Table 2 *(continue)*

Items	Factor Loadings	Eigen Value	Variance %
Factor 4: Confused by over choice	**α= 0.72**	**1.754**	**5.543**
The more I learn about the products, the harder it seems to choose the best	0.785		
All the information I get on different products confuses me	0.871		
There are so many brands to choose from that I often feel confused	0.654		
Sometimes it's hard to choose which stores to shop	0.532		
Factor 5: Novelty Fashion Consciousness	**α= 0.73**	**1.654**	**4.765**
I usually buy latest products of the very newest style and changing fashions	0.678		
Fashionable, attractive styling is very important to me	0.876		
Factor 6: Brand Loyal	**α= 0.69**	**1.524**	**3.876**
I have favorite brands I buy over and over	0.765		
I do not change brands I buy regularly	0.615		
Once I find the product or brand I like, I stick with it	0.489		
Factor 7 : Store loyalty and Store Image Consciousness	**α= 0.65**	**1.401**	**3.187**
I go to the same stores each time I buy	0.834		
Nice departmental and specialty stores offer me the best products	0.724		
Factor 8: Variety seeking	**α = 0.54**	**1.332**	**2.954**
To get variety I shop different stores and choose different brands	0.734		
It's fun to buy something new and exciting	0.675		
Factor 9: Recreational ,Hedonistic Consumers	α= 0.60	1.287	2.624
Shopping is a pleasant activity for me	0.601		
Going shopping is one of the most enjoyable activities of my life	0.564		
Shopping the stores do not waste my time	0.765		
I enjoy shopping just for the fun of it	0.644		
I take time to shop for products	0.751		
Factor 10: Impulsive Consumers	α= 0.51	1.232	2.143
I should plan my shopping more carefully than I do	0.542		
I am impulsive when purchasing	0.569		
Often I make careless purchases I later wish I had not	0.628		
I do not take the time to shop carefully for the best buys	0.492		
I do not carefully watch how much I spend	0.701		
Factor 11: Price Consciousness	α= 0.59	1.119	1.256
I buy as much as possible at sale prices	0.543		
The lowest price products are usually the best for me	0.653		
I look carefully to find the best value for money	0.743		

Table 2 *(continue)*

Items	Factor Loadings	Eigen Value	Variance %
Factor 12: Harried Shopper	$\alpha= 0.65$	1.076	1.012
I shop quickly, buying the first product or brand I find that seems good enough	0.765		

Note: Each factor bears Cronbach α value.

The results in Table 3, indicate significant differences in five out of 12 factors between male and female decision-making styles, namely Perfectionism, Novelty/fashion consciousness, Store loyalty and Store Image Consciousness, Impulsive, Careless consumers, Harried Shopper were evaluated differently by males and females. Thus, H1: Male and female consumers' decision-making styles are different, is confirmed.

Table 3
T-test

Factors	Means		2-tailed probability
	Female	**Male**	
Quality Consciousness	4.00	4.02	0.342
Brand Consciousness	3.12	3.20	0.792
Perfectionism	3.67	4.01	0.000*
Confused by over choice	3.04	2.95	0.269
Novelty Fashion Consciousness	3.92	3.54	0.000*
Brand Loyal	3.16	3.24	0.567
Store loyalty and Store Image Consciousness	3.61	3.92	0.000*
Variety seeking	3.51	3.56	0.494
Recreational ,Hedonistic Consumers	4.23	4.20	0.346
Impulsive, Careless consumers	3.65	2.97	0.000*
Price Consciousness	3.33	3.38	0.553
Harried Shopper	2.63	3.50	0.000*

* $P< 0.000$

EFA analysis for male and female respondents was carried out once more. Table 4 depicts the results.

The factors explained a total variance of 62.37 % in the male sample and 63.98 % in the female sample. Across both the samples, the eigen values of all the factors are greater than 1(---- indicates factor loadings < 0.4 in Table 4).

As seen in Table 4, nine factors emerged through exploratory factor analysis for the female respondents. These are i) Quality Consciousness, ii) Brand consciousness, iii)Brand Loyalty, iv) Novelty Fashion

Table 4
Consumer decision-making style factors for female & male consumers

Items	Female Factor loadings	Male Factor Loadings
Factor 1: Quality Consciousness	**α= 0.91**	**α= 0.87**
Getting very good quality is important for me	0.723	0.704
In general, I try to buy the best overall quality	0.614	0.654
I make a special effort to choose the very best quality products	0.578	0.492
The higher the price of the product, the better the quality	0.612	----
Factor 2: Brand Consciousness	**α= 0.84**	**α= 0.79**
The well-known national brands are for me	0.827	0.826
The more expensive brands are usually my choices	----	0.532
I prefer buying the bestselling brands	0.690	0.675
The most advertised brands are usually very good choices	0.634	----
Factor 3: Perfectionism	**----**	**----**
When it comes to purchasing products, I try to get the very best or perfect choice	----	----
I give my purchases much thought or care	----	----
My standards and expectations for the products that I buy is very high	----	----
Factor 4: Confused by over choice	**----**	**α= 0.67**
The more I learn about the products, the harder it seems to choose the best	----	0.756
All the information I get on different products confuses me	----	0.843
There are so many brands to choose from that I often feel confused	----	0.621
Sometimes it's hard to choose which stores to shop	----	0.587
Factor 5: Novelty Fashion Consciousness	**α= 0.73**	**----**
I usually buy latest products of the very newest style and changing fashions	0.687	----
Fashionable, attractive styling is very important to me	0.823	----
Factor 6: Brand Loyal	**α= 0.69**	**α= 0.72**
I have favorite brands I buy over and over	0.712	0.692
I do not change brands I buy regularly	0.678	0.647
Once I find the product or brand I like, I stick with it	0.491	0.523
Factor 7: Store loyalty and Store Image Consciousness	**α= 0.65**	**----**
I go to the same stores each time I buy	0.863	----
Nice departmental and specialty stores offer me the best products	0.729	----
Factor 8: Variety seeking	**α= 0.54**	**α= 0.60**
To get variety I shop different stores and choose different brands	0.715	0.643
It's fun to buy something new and exciting	0.689	0.654
Factor 9: Recreational, Hedonistic Consumers	**α= 0.60**	**α= 0.63**
Shopping is a pleasant activity for me	0.676	0.686
Going shopping is one of the most enjoyable activities of my life	0.567	0.554

Table 4 *(continue)*

Items	Female Factor loadings	Male Factor Loadings
Shopping the stores do not waste my time	0.798	0.773
I enjoy shopping just for the fun of it	0.667	0.646
I take time to shop for products	0.728	0.787
Factor 10: Impulsive, Careless consumers	**α= 0.51**	----
I should plan my shopping more carefully than I do	0.587	----
I am impulsive when purchasing	0.512	----
Often I make careless purchases I later wish I had not	0.608	----
I do not take the time to shop carefully for the best buys	0.512	----
I do not carefully watch how much I spend	0.719	----
Factor 11: Price Consciousness	**α= 0.59**	**α= 0.61**
I buy as much as possible at sale prices	0.547	0.576
The lowest price products are usually the best for me	0.658	0.643
I look carefully to find the best value for money	0.748	0.723
Factor 12: Harried Shopper	----	**α= 0.57**
I shop quickly, buying the first product or brand I find that seems good enough	----	0.789

Note: Each factor bears Cronbach α value.

Consciousness, v) Store loyalty and Store Image Consciousness, vi) Variety seeking, vii) Recreational & Hedonistic Consumers, viii) Impulsive, Careless consumers and ix) Price Consciousness. These factors explained 63.98 % of the total variance (Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 87%; Bartlett's Test of Sphericity: 5674.127, p<0.000). Eight factors came out from the data of male respondents. These factors are i) Quality Consciousness, ii) Confused by over choice, iii) Brand consciousness, iv) Brand Loyal, v) Variety seeking, vi) Recreational & Hedonistic Consumers, vii) Price Consciousness and viii) Harried Shopper explaining a variance of 62.37 %. (Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 84%; Bartlett's Test of Sphericity: 5976.527, p<0.000).

Six factors were common for male and female consumers. In addition, two factors namely, confused by over choice and harried shopper was valid for men. Three factors namely, Novelty & fashion consciousness; Store loyalty and store image consciousness and Impulsive, careless consumers were confirmed for female shoppers. Given considerable differences in the factor structures of decision-making styles between males and females, it may be necessary to develop a more gender-specific CSI through an exploratory study and validate the new scale relevant to each gender (Mitchell & Walsh, 2004; Sharma & Aich, 2012). Lesser reliability scores (below 0.6) of few factors like "harried shopper" and "impulsive,

careless consumers" indicates that the items used to measure these constructs need to be further tested and developed. Thus it may be necessary for future research to probe each statement of the scale exhibiting less reliability in order to generate new measures to improve the internal consistency of the factors.

Table 5
Summary table of the decision-making styles of this study

Consumer Characteristics (Sproles & Kendall, 1986)	Common Factors	Female Factors	Male Factors
Brand consciousness	Brand Consciousness	Brand consciousness	Brand Consciousness
Confused by over choice	Confused by over choice	-	Confused by over choice
Brand loyal, habitual	Brand Loyal	Brand Loyal	Brand Loyal
Novelty-fashion consciousness	Novelty-fashion consciousness	Novelty-fashion consciousness	-
Perfectionism	Perfectionism	-	-
Impulsive consumers	Impulsive Consumers	Impulsive consumers	-
Recreational consciousness	Recreational, Hedonistic consumers	Recreational & Hedonistic consumers	Recreational & Hedonistic consumers
Price consciousness	Price consciousness	Price consciousness	Price consciousness
	Variety seeking consumers	Variety seeking consumers	Variety seeking consumers
	Harried Shopper	-	Harried Shopper
	Store loyalty and store image consciousness	Store loyalty and Store Image consciousness	
	Quality consciousness	Quality consciousness	Quality consciousness

As seen in Table 5, Brand consciousness, Brand loyalty, Quality Consciousness, Recreational & Hedonistic Consumers, Variety seeking and Price Consciousness are same for both genders. Therefore, market targeting and segmenting efforts need to consider these commonalities along with the differences portrayed in Table 5. Managers should be able to implement more effective marketing strategies for male and female segments with a better understanding of both segments (Rezaei, 2014). Tables 6 & 7 sums up the different factor structures obtained in studies conducted in various countries at different points in time.

Table 6
Comparison with previous studies: male decision-making traits

(Mitchell & Walsh, 2004) (Germany)	(Bakewell & Mitchell, 2006) (UK)	(Hanzaee & Aghasibeig, 2008) (Iran)	(Mokhlis & Salleh, 2009) (Malaysia)	Sharma & Aich, 2012) (India,Mumbai)
Brand consciousness (0.76)	Brand consciousness (0.76)	Brand consciousness (0.69)	Brand consciousness (0.66)	Brand consciousness (0.66)
-	Recreational (0.56)	Recreational, hedonistic (0.74)	Brand loyal (0.38)	Brand loyal (0.38)
Fashion-sale seeking (0.67)	Novelty/ fashion consciousness (0.73)	Fashion consciousness (0.83)	Fashion consciousness (0.64)	Fashion consciousness (0.64)
Perfectionism (0.76)	Perfectionism (0.47)	Perfectionist, high-quality consciousness (0.73)	Quality consciousness (0.62)	Quality consciousness (0.62)
Impulsiveness, carelessness (0.69)	Impulsiveness (0.26)	Careless (0.42)	-	-
-	Confused by over choice (0.64)	Confused/ carelessness by Over choice(0.69)	Confused by Over choice (0.44)	Confused by over choice (0.44)
Time restricted (0.47)	Time-energy conserving(0.66)	Time-energy conserving (0.75)	Time-energy conserving(0.52)	Time energy conserving (0.52)
Satisfying (0.75)	Habitual, brand loyal (0.09)	Habitual, brand loyal (0.47)	Satisfying (0.34)	Satisfying (0.34)
Economy seeking (0.48)	Price/value consciousness (0.36)	Low price seeking (0.45)	Value-seeking (0.59)	Value-seeking (0.59)
Enjoyment-variety seeking (0.64)	Confused time restricted (0.32)	Non-perfectionist brand indifference (0.38)	-	-
	Store loyal/low price seeking (0.36)		-	-
	Store promiscuous (0.35)		-	-

Note: Parentheses contain the reliability coefficients.

Table 7
Comparison with previous studies: Female decision-making traits

(Mitchell & Walsh, 2004) (Germany)	(Bakewell & Mitchell, 2006) (UK)	(Mokhlis & Salleh, 2009) (Malaysia)	(Sharma & Aich, 2012) (India, Mumbai)	(De Oliveira et al., 2015) (Brazil)
Perfectionism (0.77)	Perfectionism (0.64)	-	-	Perfectionism (0.67)
Recreational, hedonism (0.69)	Recreational (0.38)	Recreational (0.43)	Recreational (0.43)	Variety (0.87)
Quality consciousness (0.56)	Habitual, brand loyal (0.43)	Quality consciousness (0.64)	Quality consciousness (0.64)	Pleasure to Buy (0.81)
Brand consciousness (0.79)	Brand consciousness (0.76)	Brand consciousness (0.77)	Brand consciousness (0.77)	Brands (0.70)
Novelty-fashion Consciousness (0.73)	Novelty/fashion consciousness (0.79)	Fashion consciousness (0.67)	Fashion consciousness (0.67)	Fashion consciousness (0.78)
Confused by over choice (0.79)	Confused by over choice (0.71)	Confused by Over choice(0.61)	Confused by over choice (0.61)	Impulsivity (0.67)
Time-energy conserving (0.50)	Bargain-seeking (0.59)	Shopping avoidance (0.37)	Shopping avoidance (0.37)	Price (0.62)
Impulsiveness, carelessness (0.71)	Impulsive/ Careless (0.48)	Value-seeking (0.41)	Value-seeking (0.41)	Loyalty (0.61)
Variety seeking (0.37)	Price/value consciousness (0.39)	Price Consciousness (0.30)	Price Conscious (0.30)	Choices (0.84)
	Store loyal (0.31)	Satisfying (0.30)	Satisfying (0.30)	
	Imperfection(0.40)			

Note: Parentheses contain the reliability coefficients.

Implications and Future Research

A study conducted by Wagner and Rudolph (2010) emphasized that understanding the shopping pattern of consumers has managerial implications, which determined market segmentation and retail marketing strategies. Across retail channels, promotional activities create a retail environment that is saturated with competitors who are competing for the consumers' pocket-share (Solka, Jackson, & Lee, 2011), while consumers' intention toward a retailer is influenced by several elements, such as brand, product and the retailer itself (Anicetal., 2014). In this context, understanding shopping styles of male and female consumers is a determinant to formulate effective retail strategies. The interaction styles of consumers are constant behaviour patterns that they exhibit in the transaction environment in markets (Crutsinger, Knight, & Kim, 2010). Understanding these interaction styles in the context of the product, brand, quality, and

other identified situational factors along with individual determinants such as gender throws more light on shopping styles and CDMS.

Male consumers are found to be confused by over choice. This decision difficulty can arise from many factors related to the choice environment and the individual decision maker and three primary sources of decision difficulty are i) task complexity, ii) trade-off difficulty, and iii) preference uncertainty (Broniarczyk & Griffin, 2014). Marketers and retailers need to develop communication strategies to overcome this aspect.

Our study confirmed a new trait called 'harried shopper'. In a time constrained situation, people considerably vary when it comes to striving for an optimal decision (Iyengar et al., 2006; Schwartz 2004; Schwartz et al., 2002). Schwartz et al. (2002) refered to this individual difference variable as the maximising trait. "Maximisers are thought to be individuals who seek to make the best possible decision in a wide range of situations. Satisficers, in contrast, are those who are more likely in general to settle for an option that is perceived to be good enough (Schwartz 2004)". Consumers may tend to change their preferences, switch brands, or fail to buy the intended products, when pressed for time or cannot deliberate choices. Therefore, the issue of differences between maximisers and satisficers in time-harried decisions is a research topic with considerable theoretical significance that requires further exploration (Chowdhury, Ratneshwar, & Mohanty, 2009).

A limitation of this study is that the findings of the study cannot be generalised to the broader population in India. Time and financial constraints led to the coverage of a limited geographical area for the study. Based on the considerable differences and the factor structures obtained in the decision-making styles of male and female consumers, it is essential to develop gender-specific CSI scale in order to measure the decision styles of each gender (Mitchell & Walsh, 2004).

For future research, a larger geographical area should be covered, incorporating data from customer segments and from different countries and regions to find the extent to which shopping styles are valid and generalizable. Also, other differentiators such as income, product categories, and characteristics may also be studied to examine if these variables cause differences in shopping styles. Future studies could also consider including personal values and individual attitudes, such as Schwartz's values (Schwartz, 1992, p.60) to obtain new insights of different decision-making styles. The role of personal values and individual attitudes on shopping orientation is relatively unexplored. Ungerer and Strasheim (2011) found that it will be worthwhile to explore the relationship between personal values and decision-making styles, and the influence of demographic variables on it. Individual attitudes toward shopping malls were found to be a direct predictor of mall shopping behavior and mediated the relationship between personal values and general attitudes towards shopping (Shim, 1998).

Thus it may be worthwhile to study the relationship between values, attitudes and shopping styles. Further, race, ethnicity, and culture may also influence CDS (Cooper-Patrick et al., 2017). These factors may be explored more in future studies.

CONCLUSION

This study confirms that consumer decision-making styles vary among men and women, corroborating previous studies. However, comparing this study with previous studies there are significant differences found. These differences are surprising and interesting, as very few studies in India have examined the role of gender differences towards consumer decision making styles. Twelve factors indicating consumers' decision-making styles were obtained in this study, carried out in Tamilnadu, India. Quality consciousness, Brand consciousness, Perfectionism, Confused by over choice, Novelty-fashion consciousness, Brand-loyal, Store loyalty and store image consciousness, Variety seeking, Recreational-Hedonistic, Impulsive consumers, Price Consciousness and Harried Shopper.

Six factors loaded for all respondents. These are Brand loyalty, Quality Consciousness, Brand consciousness, Variety seeking, Recreational & Hedonistic Consumers, Price Consciousness. Specific to women, three factors loaded. These indicate that female consumers are more novelty/fashion conscious. They are more interested in buying new styles and are more excited about fashion than men. Therefore, the stores should be well stocked with novel,

fashionable products and brands to attract them. Secondly, they are more inclined to be store loyal and store image conscious. Familiar stores seem to command the loyalty of female consumers. This also points out that men can be more experimental when it comes to store choices. Third, women are found to be more impulsive and careless while shopping, denoting that they tend to engage in unplanned purchases. If products and prices are attractive, they may exhibit impulsive buying behaviour without giving deliberate thought to purchase decisions. However, whether this impulsive decision will lead to post-purchase regret needs further investigation.

Two factors loaded particularly for men. First, they tend to get confused by over choice, suggesting that men do not want to take much cognitive load when it comes to shopping. Second, they are harried shoppers, who shop quickly and buy the first product or brand that seems good enough. Time may be considered a limitation among men rather than women and hence they may shop in a hurry.

Both male and female consumers were found to be price conscious. The study also found that both genders are quality and brand conscious. Therefore, it is important for the companies to offer products at competitive prices and at the same time maintain better quality, in order make both the consumer's groups stay loyal. Companies need to be cautious while promoting and positioning their products through various advertising mediums as the market is competitive with many alternatives. Hence, brand

building exercises and right positioning of products by highlighting quality becomes pertinent. Both male and female consumers are found to be variety seeking, which indicates that offering choice alternatives and customisation may induce brand loyalty, which is another factor that drives shopping orientation. Also, both groups seem to indulge in shopping as a recreation and are hedonistic, which hints that pleasure shopping is also a significant factor to which marketers must pay attention.

The findings clearly indicate that gender causes significant differences in decision-making styles. Hence, there is a need to develop gender-specific scales to measure shopping orientations. The four additional factors obtained in our study also throw more light on consumer decision-making styles (CDMS) and it definitely requires further investigation. Nowadays, shoppers are influenced by various other factors that requires measurement and validation. CSI developed in 1986 can be made use as a base to advance new scales to quantify consumer decision-making styles.

REFERENCES

Anić, I. D., Piri Rajh, S., & Rajh, E. (2014). Antecedents of food-related consumer decision-making styles. *British Food Journal*, *116*(3), 431-450.

Assael, H. (1984). *Consumer behavior and marketing action.* Boston, MA: Kent Publishing Company.

Bae, S., & Miller, J. (2009). Consumer decision-making styles for sports apparel: Gender comparisons between college consumers. *The ICHPER-SD Journal of Research in Health, Physical Education, Recreation, Sport & Dance*, *4*(1), 40.

Bakewell, C. & Mitchell, V. W. (2003). Generation Y female consumer decision-making styles. *International Journal of Retail & Distribution Management*, *31*(2), 95-106.

Bakewell, C., & Mitchell, V. W. (2006). Male versus female consumer decision making styles. *Journal of business research*, *59*(12), 1297-1300.

Bates, L. (1998). UK consumer decision-making styles. *Journal of Marketing Management*, *14*(1-3), 199-225.

Bauer, H. H., Sauer, N. E., & Becker, C. (2006). Investigating the relationship between product involvement and consumer decision-making styles. *Journal of Consumer Behaviour*, *5*(4), 342-354.

Bettman, J. R., Luce, M. F., & Payne, J. W. (1998). Constructive consumer choice processes. *Journal of Consumer Research*, *25*(3), 187-217.

Broniarczyk, S. M., & Griffin, J. (2014). Decision difficulty in the age of consumer empowerment. *Journal of Consumer Psychology, 4*(4), 1-18.

Cant, M. C., & Hefer, Y. (2013). Visual merchandising displays-functional or a waste of space in apparel retail stores?. *Gender and Behaviour, 11*(1), 5336-5341.

Centre for Monitoring Indian Economy. (2017, July). Retrieved March 10, 2017 from https://cmie.com/kommon/bin/sr.php?kall=warticle&dt=2016-07-0 4 % 2 0 13:45:29&msec=170

Chen, H., Phelan, K. V., & Jai, T. M. (2016). Gender differences in deal hunting: What motivates consumers to search and book hotel deals? *Journal of Hospitality Marketing & Management*, *25*(5), 613-639.

Chowdhury, T. G., Ratneshwar, S., & Mohanty, P. (2009). The time-harried shopper: Exploring the differences between maximizers and satisficers. *Marketing Letters*, *20*(2), 155-167.

Cooper-Patrick, L., Gallo, J. J., Gonzales, J. J., Vu, H. T., Powe, N. R., Nelson, C., & Ford, D. E. (1999). Race, gender, and partnership in the patient-physician relationship. *Jama, 282*(6), 583-589.

Crutsinger, C., Knight, D., & Kim, H. (2010). Teens' consumer interaction styles: The impact of assertive and aggressive behavior on attitudes towards marketing practices. *International Journal of Consumer Studies*, *34*(2), 196-203.

Darden, W. R., & Ashton, D. (1974). Psychographic profiles of patronage preference groups. *Journal of Retailing*, *50*(4), 99-112.

Darley, W. K. & Smith, R. E. (1995). Gender differences in information processing strategies: An empirical test of the selectivity model in advertising response. *Journal of Advertising*, *24*(1), 41-59.

De Oliveira, J. V. B., de Mesquita, J. M. C., & de Muylder, C. F. (2015). Evaluation of the scale Consumer Styles Inventory (CSI): A study with adult female population of Minas Gerais State--Brazil/Avaliacao da escala Consumer Styles Inventory (CSI) no universo feminino adulto mineiro. *AOS-Amazonia, Organizacoes e Sustentabilidade*, *4*(1), 173-191.

De Vaus, D. (2002). Analyzing social science data: 50 key problems in data analysis. London, UK: Sage Publications.

Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science*, *40*(3), 434-449.

Dörnyei, Z. (2007). Research *methods in applied linguistics*. New York: Oxford University Press.

Fan, J. X., & Xiao, J. J. (1998). Consumer decision-making styles of young-adult Chinese. *Journal of Consumer Affairs*, *32*(2), 275-294.

Ferber, R. (1977). Research by Convenience. *Journal of Consumer Research, 4*(1), 57-58.

Fischer, E., & Arnold, S. J. (1994). Sex, gender identity, gender role attitudes, and consumer behavior. *Psychology & Marketing*, *11*(2), 163-182.

Gilbert, D., Lee-Kelley, L., & Barton, M. (2003). Technophobia, gender influences and consumer decision-making for technology-related products. *European Journal of Innovation Management*, *6*(4), 253-263.

Goswami, S., & Khan, S. (2015). Impact of consumer decision-making styles on online apparel consumption in India. *Vision*, *19*(4), 303-311.

Hafstrom, J. L., Chae, J. S., & Chang, Y. S. (1992). Consumer decision-making styles: Comparison between the United States and Korean young consumers. *The Journal of Consumer Affairs*, *26*(1), 146-158.

Hanzaee, K. H., & Aghasibeig, S. (2008). Generation Y female and male decision-making styles in Iran: are they different? *The International Review of Retail, Distribution and Consumer Research, 18*(5), 521-537.

Hiu, A. S., Siu, N. Y., Wang, C. C., & Chang, L. M. (2001). An investigation of decision-making styles of consumers in China. *Journal of Consumer Affairs*, *35*(2), 326-345.

Hoyer, W. (1984). An Examination of Consumer Decision Making for a Common Repeat Purchase Product. *The Journal of Consumer Research, 11*(3), 822-829

Indian Consumer Market. (2017, July). Retrieved March 10, 2017, from https://www.ibef.org/industry/indian-consumer-market.aspx

Iyengar, S. S., Wells, R. E., & Schwartz, B. (2006). Doing better but feeling worse: Looking for the

"best" job undermines satisfaction. *Psychological Science*, *17*(2), 143-150.

Jacoby, J., Chestnut, R. W., & Fisher, W. A. (1978). A behavioral process approach to information acquisition in nondurable purchasing. *Journal of Marketing Research*, *15*(4), 532-544.

Jacoby, J., Johar, G., & Morrin, M. (1998) Consumer behavior: A quadrennium. *Annual Reviews Psychology*, *49*(1), 319 – 344.

Kamaruddin, A. R., & Mokhlis, S. (2003). Consumer socialization, social structural factors and decision-making styles: a case study of adolescents in Malaysia. *International Journal of Consumer Studies*, *27*(2), 145-156.

Khare, A., Parveen, C., & Mishra, A. (2012). Influence of normative and informative values on fashion clothing involvement of Indian women. *Journal of Customer Behaviour*, *11*(1), 9-32.

Kumar, A., Vohra, A., & Dangi, H. K. (2016). Consumer decision-making styles and post-purchase behavior of poor for FMCGs. *International Journal of Consumer Studies*, *5*(2), 79-94.

Lastovicka, J. L. (1982). On the validation of lifestyle traits: A review and illustration. *Journal of Marketing Research*, 126-138.

Levin, A. M., Levin, I. P., & Weller, J. A. (2005). A multi-attribute analysis of preferences for online and offline shopping: Differences across products, consumers, and shopping stages. *Journal of Electronic Commerce Research, 6*(4), 281.

Lysonski, S., Durvasula, S., & Zotos, Y. (1996). Consumer decision-making styles: A multicountry investigation. *European Journal of Marketing, 30*(12), 10-21.

Meyers-Levy, J., & Sternthal, B. (1991). Gender differences in the use of message cues and judgments. *Journal of marketing research*, *28*(1), 84-96.

Mitchell, V. W., & Walsh, G. (2004). Gender differences in German consumer decision-making styles. *Journal of Consumer Behaviour*, *3*(4), 331-346.

Mitchell, V., & Bates, L. (1998). UK consumer decision-making styles. *Journal of Marketing Management, 14*(1-3), 199-225.

Mokhlis, S., & Salleh, H. S. (2009). Consumer decision-making styles in Malaysia: An exploratory study of gender differences. *European Journal of Social Sciences, 10*(4), 574-584.

Park, Y. A., & Gretzel, U. (2010). Influence of consumers' online decision-making style on comparison shopping proneness and perceived usefulness of comparison shopping tools. *Journal of Electronic Commerce Research, 11*(4), 342–354.

Pol, L. G. (1991). Demographic contributions to marketing: An assessment. *Journal of the Academy of Marketing Science, 19*(1), 53-59.

Potgieter, D., Wiese, M., & Strasheim, A. (2013). Demographic Differences in Adult Consumers 'Decision-Making Styles in Tshwane, South Africa. *Journal of Family Ecology and Consumer Sciences*, *41*(0), 11–27.

Rezaei, S. (2015). Segmenting consumer decision-making styles (CDMS) toward marketing practice: A partial least squares (PLS) path modeling approach. *Journal of Retailing and Consumer Services*, *22*, 1-15.

Shim, S., & Eastlick, M. A. (1998). The hierarchical influence of personal values on mall shopping attitude and behavior. *Journal of Retailing*, *74*(1), 139-160.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, *25*(1), 1-65.

Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: Happiness is a matter of choice. *Journal of Personality and Social Psychology*, *83*(5), 1178.

Schwartz, B. (2004). The paradox of choice—why more is less. New York: Harper Collins.

Scott, S. G., & Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure. *Educational and Psychological Measurement*, *55*(5), 818-831.

Sharma, K., & Aich, S. (2012). Consumer shopping decision making styles at Departmental Stores: An exploratory study of gender differences. *Indian Journal of Commerce & Management Studies*, *3*(2), 51-57.

Solka, A., Jackson, V. P., & Lee, M. Y. (2011). The influence of gender and culture on Generation Y consumer decision making styles. *The International Review of Retail, Distribution and Consumer Research, 21*(4), 391-409.

Spawton, A. (1989) 'Grapes and wine seminar-prospering in the 1990s: Changing your view of the consumer'. *European Journal of Marketing*, *23*(9), 6-48.

Sproles G. B., & Kendall, E. L. (1986). A methodology for profiling consumers' decision making styles. *Journal of Consumer Affairs*, *20*(2), 267-279.

Sproles, E. K., & Sproles, G. B. (1990). Consumer decision-making styles as a function of individual learning styles. *The Journal of Consumer Affairs, 24*(1), 134-147.

Tai, S. (2005). Shopping styles of working Chinese female. *Journal of Retailing and Consumer Services, 12*(3), 191-203.

Tanksale, D., Neelam, N., & Venkatachalam, R. (2014). Consumer decision making styles of young adult consumers in India. *Procedia-Social and Behavioral Sciences*, *133*, 211-218.

Tarnanidis, T., Owusu-Frimpong, N., Nwankwo, S., & Omar, M. (2015). A confirmatory factor analysis of consumer styles inventory: Evidence from Greece. *Journal of Retailing and Consumer Services*, 22, 164-177.

Unal, S., & Ercis, A. (2008). Decision-Making Styles and Personal Values of Bosnian and Turkish Young People. *Management of International Business & Economics Systems,* 515-32.

Ungerer, L. M., & Strasheim, A. (2011). The moderating effect of living standards on the relationship between individual-level culture and life satisfaction: A value segmentation perspective. Management Dynamics: *Journal of the Southern African Institute for Management Scientists, 20*(3), 25-50.

Van Slyke, C., Comunale, C. L., & Belanger, F. (2002). Gender differences in perceptions of web-based shopping. *Communications of the ACM*, *45*(8), 82-86.

Verma, N., Bhat, A. B., Rangnekar, S., & Barua, M. K. (2015). Association between leadership style and decision-making style in Indian organizations. *Journal of Management Development*, *34*(3), 246-269.

Wagner, T., & Rudolph, T. (2010). Towards a hierarchical theory of shopping motivation. *Journal of Retailing and Consumer Services*, *17*(5), 415-429.

Wedel, M., & Kamakura, W. A. (2000*). Market Segmentation: Conceptual and methodological foundations* (2nd ed.). Norwell, MA: Kluwer Academic Publishers.

Wesley, S., LeHew, W., & Woodside, A. G. (2006). Consumer decision-making styles and mall shopping behavior: Building theory using exploratory data analysis and the comparative method. *Journal of Business Research*, *59*(5), 535-548.

Westbrook, R. A., & Black, W. C. (1985). A

motivation-based shopper typology. *Journal of Retailing*, *61*(1), 78-103.

Wickliffe, V. P. (2004). Refinement and re-assessment of the consumer decision-making style instrument. *Journal of Retailing and Consumer Services, 11*(1), 9-17

Zhang, S. S., Van Doorn, J., & Leeflang, P. S. (2014). Does the importance of value, brand and relationship equity for customer loyalty differ between Eastern and Western cultures?. *International Business Review*, *23*(1), 284-292.

Distinguishing TOEFL Score: What is the Lowest Score Considered a TOEFL Score?

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ABSTRACT

Paper-based TOEFL scores have been used to determine the level of English proficiency for EFL learners for various purposes. However, in repeat tests some lower scores fluctuate despite no additional classroom learning, thus they cannot be used to judge the English level of those taking the test. There is limited research into the lowest score that does not fluctuate outside the Standard Error of Measurement, which the Educational Testing Service (ETS) set at 13 points. Therefore, this research was aimed at determining the lowest score which can be used for distinguishing the students' learning progress or proficiency. Scores of 1,180 test takers who took paper-based TOEFL a minimum of three times over three days to two weeks were analyzed statistically. The analysis revealed that the scores stopped fluctuating outside the Standard Error of Measurement when test takers reached the score of 417. Therefore, not until a test taker obtains the minimum paper-based TOEFL score of 417 can their English level be determined by the TOEFL score. This research has significant implications for employers, universities and high schools that currently use a TOEFL score lower than 417 as the minimum entrance or graduation requirement.

Keywords: TOEFL, lowest real TOEFL score, minimum score, placement test, Standard Error of Measurement

INTRODUCTION

English proficiency tests are designed to measure the level of English for various purposes. Paper-based TOEFL is one such test and is the most preferred English proficiency test because it is accepted by many institutions (Brown, 2004, p. 84). One reason for its popularity is that it is easy to obtain and create (Mustafa, 2015;

Mustafa & Apriadi, 2016). Test takers only need two hours to complete the test. In addition, TOEFL scores are also used as placement tests to indicate the progress of learning (Brown, 1996, p. 12), for job and scholarship application requirements, and university enrolments (Bachman & Palmer, 1996, p. 185). However, according to probability theory, the probability for each question being answered correctly by random guesses, considering the questions are multiple choice with four options, is 25%, or TOEFL scores between 323 and 363 (Allan 1992). In addition, experience indicates that scores greater than 363 fluctuated when a test taker took multiple tests without any preparation in between. However, ETS, the TOEFL test developer, does not warn the score users about this weakness. Moreover, although there has been much research into paper-based TOEFL, none addressed the issue of score fluctuation. As a result, researchers such as Sabarun (2012), had used TOEFL to categorize students with the scores of 350 and 370 into two different levels. In addition, Heffernan (2006, p. 165) considered the changes in TOEFL scores obtained by undergraduate university students in Japan between pretest and post-test of 340-393, 347-400, 363-390, and 387-397 as improvements. Therefore, it is essential to figure out what is the lowest score which can be used in determining students' learning progress or placing students into different group levels. The current study aimed at finding out this score by utilizing statistical analysis. The result is significant for institutions which use PBT TOEFL score as criteria in recruitment, placement, and admission, or other requirements.

LITERATURE REVIEW

This section discusses variables involved in this research, i.e. TOEFL and fluctuation in TOEFL scores, reliability and Standard Error of Measurement for TOEFL.

Test of English as a Foreign Language (TOEFL)

TOEFL is one of the standardized language tests for foreign language learners. It is a reliable test designed by Educational Testing Service (ETS) based in New Jersey, U.S.A. The test has evolved from a paper-based test to an internet-based test through several phases of revision. It was first used as a paper-based test in the early 1960's (Spolsky, 1990). The test is in three sections, i.e. listening comprehension, structure and written expression, and reading comprehension. In 1998, a computer-based TOEFL (CBT TOEFL) was developed, which included Test of Written English (TWE), but is now discontinued, replaced by the internet-based TOEFL (iBT TOEFL) (ETS, 2011a, pp. 3-5). The iBT TOEFL offers both English written and spoken tests, while structure and written expression, which were tested in PBT and CBT, has been excluded in the iBT TOEFL (ETS, 2005, p. 4). Although an internet-based test is very effective, it is not possible in the areas where internet connection is unavailable or unreliable, and therefore PBT TOEFL with TWE is an alternative (ETS, 2011, p. 3).

In addition, iBT TOEFL is not required in many universities in non-English speaking countries due to its unaffordability. In that case, Institutional TOEFL, which is PBT TOEFL without TWE (Tannenbaum & Baron, 2012, pp. 7-8), is the alternative.

TOEFL as A Type of Language Assessment

Teachers have been using language assessments to judge the success of both teaching and learning practices (Brown, 2004, p. 4). A test, as a subset of assessment, is used to measure language proficiency (Alderson, 2007, pp. 22-25), as required for placement in a language training, scholarship or job application. One such test is paper-based TOEFL (Brown, 1996, p. 5), a type of English proficiency test which is very popular among EFL learners. It was first introduced in the United States in 1963 (Wainer & Lukhele, 1997, p. ii). Although it is claimed that the test is a valid measure of nonnative speaker English proficiency (Rosenfeld, Oltman, & Sheppard, 2004, p. 1), some have argued that the test does not represent the whole language performance (Chalhoub-Deville & Turner, 2000, p. 537). One criticism was that communicative performance was not tested in paper-based TOEFL. In addition, Institutional Testing Program TOEFL (ITP TOEFL), "a retired version" of paper-based TOEFL (Nisbet, 2002, p. 31) administered for educational institutions to make admission decisions or as a graduation requirement (Takagi, 2011, p. 113), does not test either communicative or written English performance. ETS responded positively to the feedback from these researchers and the new theories in language testing and thus revised the TOEFL to include all components of language performance (ETS, 2010). The upgraded version is known as internet-based TOEFL. Test takers admitted that it is a more representative tool to measure proficiency in English for Academic Purposes (DeLuca, Cheng, Fox, Doe, & Li, 2013, p. 673). However, paper-based and ITP TOEFL are still used today when iBT TOEFL is not possible, for example, as a result of unavailable internet connection and cost restrictions.

Fluctuation in TOEFL Scores

Like other multiple-choice tests, the reliability of paper-based TOEFL is threatened by random guesses. There are four options for each question which means that the possibility of guessing correctly is 25%. Table 1 presents the scores resulting from purely random guesses.

Table 1
TOEFL scores resulting from random guesses

No	Section	Correctly guessed	Scores
1	Listening	13	36-40
2	Structure	10	30-35
3	Reading	13	31-34
	Total	36	323-363

Note: The conversion is based on Gear and Gear (1996)

Table 1 above shows that a test taker relying on guesses can obtain a score between 323 and 363. However, Tannenbaum and Baron (2012, p. 14) categorized these

scores as level A2 in the Common European Framework of Reference (CEFR), which according to Council of Europe (2001) the students have the ability to

- understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment);

- communicate simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters;

- describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need. (p. 24).

Another threat to test validity and reliability is what Thorndike (1951, p. 568) referred to as "test-wiseness" strategy, the ability to answer a multiple-choice test correctly without having the knowledge required to answer the question (Millman & Bishop, 1965, p. 707). According to Allan (1992), the strategies include: a) absurd option, b) grammatical cue, c) item give-away, d) longer length option, e) option inclusion, f) precise option, g) similar option, h) choose neither or both of two options which imply the correctness of each other, i) choose neither or one (but not both) of two statements, one of which, if correct, would imply the incorrectness of the other, j) specific determiner, and k) stem-option. (p. 101)

Research by Tavakoli and Samian (2014) revealed that test takers used test-wiseness strategy in paper-based TOEFL. Yang (2000) analyzed Listening and Reading Comprehension Sections in one of the TOEFL materials and discovered that 48% to 64% of questions across the sections were "identified as susceptible to test-wiseness." Allan (1992, p. 108) provided the average number of correct answers which can be obtained by using test-wiseness strategy, i.e. 55%. Table 2 shows the scores which can be obtained by using test-wiseness strategy.

Table 2 shows that the minimum paper-based score obtained by using test-wiseness strategy is 323 and the maximum is 407. These scores consider the percentage of questions susceptible to test-wiseness, which ranges from 48% to 64% of the questions. Since there is 55% chance of correctly answering the susceptible-to-test-wiseness questions, the number of such questions was multiplied by 55%.

These two threats to validity and reliability result in fluctuation in TOEFL scores when the test is repeated. Random guesses and test-wiseness strategy are used less often by high proficiency groups (Ebel, 1968, p. 321; Kashkouli & Barati, 2013, p. 1584). This suggests that low proficiency test takers need to rely on their test-taking strategy, and those with zero-knowledge should take random guesses. In addition, the scoring system for TOEFL does not give a penalty for incorrect answers, which produces a bias for low proficiency students due to guessing (Reid, 1977, p. 335). Guessing can be right, or wrong, as can the

answers based on test-wiseness, producing fluctuation when a test taker repeats the test.

Table 2
TOEFL scores resulted from test-wiseness strategy

No	Sections	Susceptibility of 48%		Susceptibility of 64%		Scores	
		Questions	Correct (55%)	Questions	Correct (55%)	48%	64%
1	Listening	24	13	32	18	35-40	43-44
2	Structure	19	11	26	14	30-35	36-38
3	Reading	24	13	32	18	31-34	38-40
	Total					323-363*	390-407*

Note: The conversion is based on Gear and Gear (1996)

Reliability and Standard Error of Measurement for TOEFL

Reliability refers to the consistency and accuracy of measurement when a test is "administered under similar conditions" (Hatch & Lazaraton, 1991, p. 530). The reliability level ranges between 0% and 100%. When a test is re-administered to a group of participants more than once, and they obtain exactly the same scores, the reliability of the test is 100%. For classroom use, Douglas (2010, p. 107) and Wells and Wollack (2003, p. 5) suggest a reliability level of 70%. For standardized tests such as TOEFL or IELTS, the level should not be less than 85% (Frisbie, 1988, p. 29). Among other types of reliability test, Hatch and Lazaraton (1991, p. 531) ranked test-retest method as the most preferred. It is calculated by looking at the correlation between the first and the second test (Douglas. 2010, p. 105), with the following formula from Best and Kahn (2006, p. 384):

$$r = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}}$$

Where y = sum of second test subtracted from each second test score

xy = sum of each x multiplied by each y

For paper-based TOEFL, the reported reliability for an overall score was 96%, 93% for listening comprehension section, 90% for structure and written expression section, and 88% for reading comprehension section ETS (2016). Therefore, paper-based TOEFL is considered a reliable test.

The reliability level allows us to determine the range of fluctuation if the test is repeated, known as Standard Error of Measurement. It is calculated by using the following formula proposed by Douglas (2010, p. 108):

$$SEM = SD\sqrt{1 - Rel}$$

Where

SEM = Standard Error of Measurement.
SD = Standard Deviation
$Rel.$ = Reliability

ETS (2016) reported that the Standard Error of Measurement for Paper-based TOEFL is 13 points. Therefore, if the score obtained by a test taker reflects his English proficiency, the fluctuation of his score will not be larger than 13 points when he repeats the same test.

METHODS

This section presents description of the sampling procedure, data collection and statistical analysis.

Study Design, Population and Sampling Procedure

This study used TOEFL scores collected from the Language Center of Syiah Kuala University, the oldest and largest university in Aceh, the westernmost province of Indonesia. The test was administered by the Center as a graduation requirement for students, who were required to obtain a minimum score of 450, as well as some members of the public who took the test for job and scholarship applications. Others took the test for their self-assessment and practice. The test material used was a reliable standardized TOEFL design by ETS. The raw scores are converted to scaled scores using a statistical method called Item Response Theory (IRT) with a 3PL Model (Way & Reese, 1991, p. 18). This method requires values for item discrimination and item difficulty, which are not revealed by ETS to public. Therefore, it is less likely to use the formula to convert the scores. Thus, a conversion table should be used. Conversion tables that are easy to use are provided by Phillips (2003) and Pyle and Page (1995). The table provided by Phillips (2003) is preferred due to the popularity of the book in which the table is provided. Moreover, the conversion tables are very similar. The data were collected between 2011 and 2016. In order to examine the fluctuations in test scores, this study used the data from test takers who sat the test at least three times, and for the test takers who took the test three times, the middle test was used as the baseline of the dataset. The absolute difference between the first test and the baseline was calculated, as well as the third and the baseline. These absolute differences were used to measure the fluctuation of the TOEFL scores. The absolute difference between the first and the baseline test was measured as the lower deviation, while the absolute difference between the third and the baseline test was measured as the upper deviation. According to the study design, 45,000 TOEFL scores were taken from 10,850 test takers who took the test at least three times. For the test takers who took the test more than three times, the first three tests were used as a dataset with the second test as the baseline. Furthermore, the second to the fourth tests were also used as a dataset, but the baseline was shifted to the third test as the middle test between the second and the fourth test. The same procedure was used for other numbers of times the

test was taken. Therefore, test takers who took the test three times contributed only 1 dataset, those who took the test 4 times gave 2 datasets, 3 datasets for the test takers taking the test 5 times, and so forth (Figure 1). The time between baseline and the other tests was restricted to three days to two weeks as a sampling criterion. This time lag was decided based on the research result by Kokhan (2012, p. 303) who suggests that the TOEFL scores tend to be less stable as the interval gets longer. The minimum interval of three days was used because no test takers repeated the test in less than three days.

Statistical Analyses

The study aimed to determine the lowest TOEFL score where the fluctuation is no larger than 13 points, the Standard Error of Measurement of paper-based TOEFL given by ETS (2016). In order to achieve this objective, the baseline score was used as the sample score in the study. These datasets were examined by One-Sample T-Test for lower and upper deviations to test whether the mean of the deviations is equal to or less than 13. Figure 2 in the following provides a clear description about the deviations.

Figure 1. Baseline in a dataset for test takers taking more than three tests
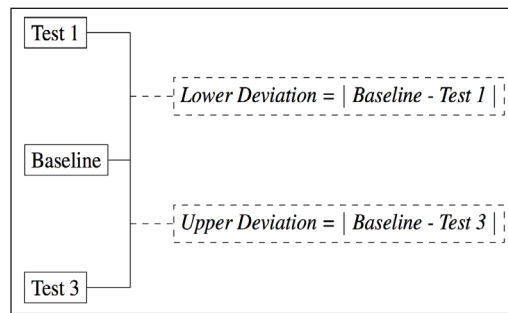
Figure 2. Calculating upper and lower deviations in a dataset

In Figure 1, the first dataset consists of *Test 1*, *Test 2* and *Test 3*, where *Test 2* is the baseline, considered as a sample score to be evaluated. The second dataset includes *Test 2*, *Test 3,* and *Test* 4, and now *Test 3* is the baseline, and so forth.

One of the most important assumptions of the Independent T-Test is that the data should be normally distributed. A Shapiro-Wilk test was used to test the normality assumption at 2.5% of significant error. The baseline scores for evaluation were set from the lowest to the highest possible scores, ranging from 310 to 677. The score of 310 was used as the lowest score because ETS (2011, p. 14) claimed that 310 is the lowest observed score obtained by test participants. After all possible scores had been examined,

the results were compared for all scores starting from 310. The first baseline score for which both lower and upper deviations of the T- Test result were not significant (P>0.05) and the Shapiro-Wilk test were not significant (P>0.025) was the score where the fluctuations were lower or equal to 13 points. This score was considered the lowest score which can be used to distinguish the level of English proficiency.

RESULT

Statistical description revealed the characteristics of the scores in the population, i.e. minimum, maximum, median and mean scores. For the first test, the extreme values - minimum and maximum scores - were 217 and 627 respectively. The median and mean scores of the first test were 363 and 369.3. The median indicated that the scores

obtained by 50% of test takers in the first test were below 363 and those received by the rest of the test takers were greater than 363. The average was 369.3 with 95% confidence interval, i.e. 368.68 and 369.95. The second test (baseline) had the extreme values of 217 (minimum) and 617 (maximum). In the second test 50% of the samples obtained scores below 367, and the rest were above that score. The average score was 373.03 with 95% confidence interval, i.e. between 372.37 (lower bound) and 373.69 (upper bound). Finally, the extreme values for the third test were scores of 217 and 620, with the median score of 370. The mean score, with 95% confidence interval for the third test was 376.94, with 376.24 for the lower bound and 377.64 for the upper bound. The summary is presented in Table 3.

Table 3
Descriptive statistics

Test	n	Min	Med	Max	Mean	95% Cl of Mean	
						Lower bound	Upper bound
1st test	15,000	217	363	627	369.32	368.68	369.95
2nd test	15,000	217	367	617	373.03	372.37	373.69
3rd test	15,000	217	370	620	376.94	376.24	377.64

Table 3 shows that on average the mean, lower and upper bounds would be likely to increase by around 3 points every time the test takers retook the test. This increase is presented in Figure 3.

The scores in Figure 3 above, however, do not have any meaningful interpretation in this study because the last possible numbers in TOEFL scores based on the TOEFL

scoring system are 0, 3, and 7 (e.g. 360, 363, 367, 370, ...). Therefore, the mean scores must be rounded to 370 (first test), 373 (second test/baseline) and 377 (third test).

In order to find out which score had lower and upper deviations within 13 points, we performed a One- Sample T-Test for each score, starting from 310. Our null hypothesis states that a score with average deviations
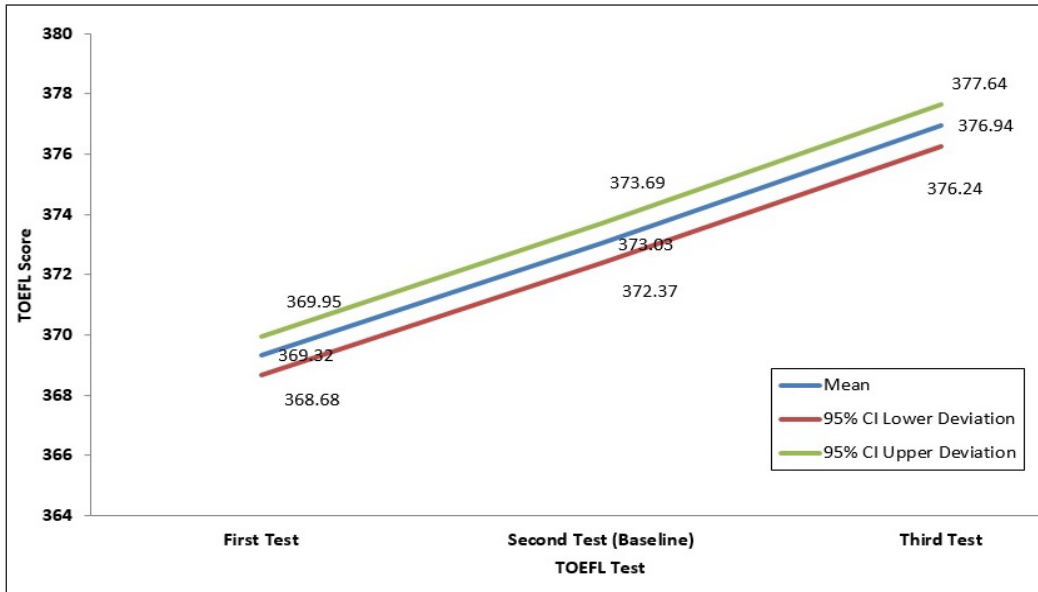
Figure 3. Mean scores and their 95% confident intervals

lower than or equal to 13 points for takers who took two consecutive tests within two weeks is considered a real TOEFL score which represents the test taker's English proficiency. Among the whole population, 1,180 test takers (7.87% of the population) met the sampling criteria. We examined both their lower and upper deviation, ranging from 310 to 677. However, the examination was stopped at 457 due to absence of the required number of samples for conducting a One-Sample T-Test. The number of samples for each baseline is shown in Figure 4.
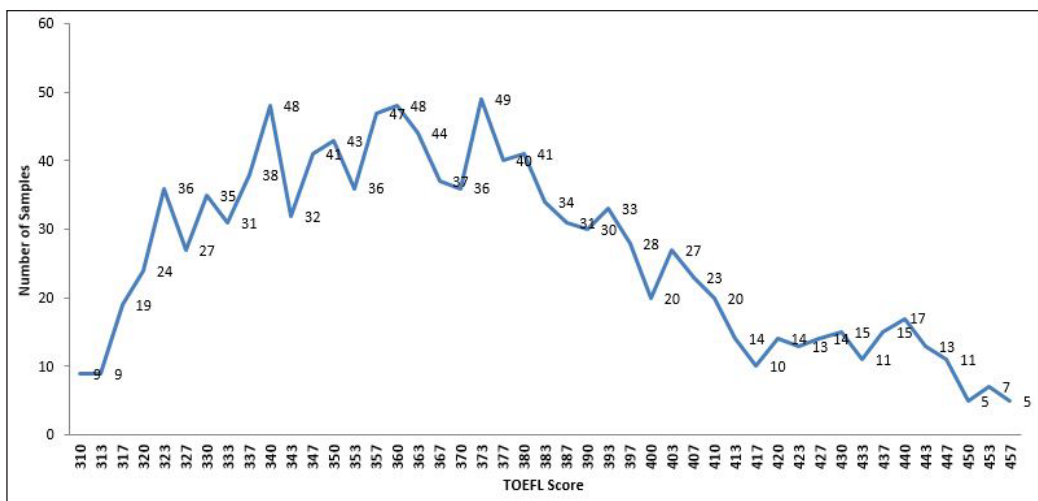
Figure 4. Number of samples evaluated for each score

Among those baseline scores evaluated, the lowest score that had p-values of One-Sample T-Test higher than 0.05 for both lower and upper deviations would be considered as the boundary where the rejection of null hypothesis, that the score had a deviation lower than or equal to 13 points, failed. This conclusion should be supported by the Shapiro-Wilk test, the normality assumption test, that should have p-values higher than 0.025. The One-Sample T-Test result is presented in Figure 5 below.
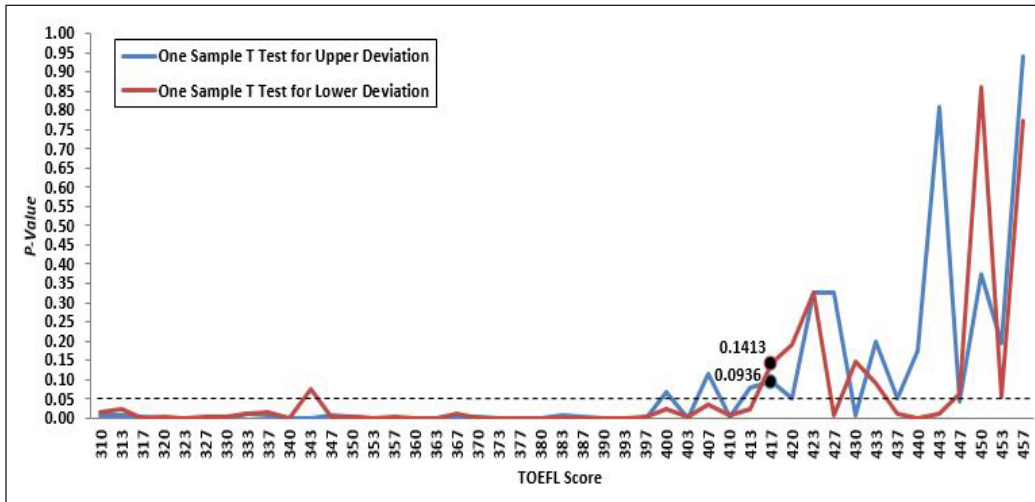
Figure 5. One-Sample T-Test

Figure 5 above shows that the lowest baseline score that failed to reject the null hypothesis was 417. Further, the One-Sample T-Test showed that the lower deviation at this score had a p-value of 0.094, while the upper deviation p-value was 0.141. Moreover, the number of samples at this baseline was ten scores, with p-values for the Shapiro- Wilk Test of 0.053 and 0.029 for the lower and upper deviation respectively. The detail is given in Table 4.

Table 4
Summary of the test for the score of 417

Variables		Statistics
TOEFL Score Evaluated (Baseline)		417
Number of Samples Evaluated		10
P-value for Normality Test	Lower Deviation	0.053
	Upper Deviation	0.029
P-value for One-Sample T-Test	Lower Deviation	0.094
	Upper Deviation	0.141
Sample size		1,180 (7.87%)
Population size		15,000

Although the lowest score with deviations within 13 points was 417, stability was indicated at the score of 400, and it appeared better at 407. However, only the upper deviation, the deviation between the second and the third tests, satisfied the Standard Error of Measurement of 13 points at these scores.

DISCUSSION

The objective of this study was to find out the lowest score in paper-based TOEFL which can be used for placement or to judge the level of English proficiency. We hypothesized that if the score fluctuated higher than the Standard Error of Measurement, the score cannot be used for the given purposes. Therefore, a statistical analysis was used to test repeat TOEFL scores between 310 and 677 to find out the lowest score where fluctuations were within the Standard Error of Measurement, i.e. 13 points. A total of 1,180 scores were analyzed to determine the interval of fluctuations between tests at intervals of less than two weeks. The research result shows that stability first appeared at a score of 400 but only for the subsequent test not the preceding test. The scores stopped fluctuating at 417 for both previous and next tests.

The data revealed that greater fluctuations occurred between the first and the second tests/baseline, particularly in the range between 400 and 413 and between 437 and 443. This finding is expected because test takers are unfamiliar with the test on their first attempt. Test takers could also be anxious when they take the

test the first time, this anxiety decreases once they have experienced a similar test (Young, 1991, p. 434). In addition, first timers were also test-naive, trying their best to answer all questions because "they overestimated their likelihood of passing the exam" (Nijenkamp, Nieuwenstein, De Jong, & Lorist, 2016, p. 15). When they did not pass and took the second test, they might have applied test-wiseness strategy or guessed randomly, which they also did in the third test. In addition, after failing the first test, the students have been found to do some revision (McManus, 1992, p. 61) and therefore could master some basic rules of grammar and reading sub-skills, and strategies for listening such as focusing on the second speaker, prediction, etc. At the third test, where fluctuations were more stable, they might have read the same materials or tried more advanced rules and strategies but failed to understand them. In addition, fatigue and boredom presumably contributed to this stable score fluctuation (McManus, 1992, p. 61).

Although these research findings do not invalidate the use of TOEFL for language training or as an admission requirement, these findings suggest that scores below 417 cannot be confidently used to judge the English proficiency of the test takers. The figure of 417 is only 16 points ahead of scores which can be obtained through random guessing, and three points further from scores obtained through test-wiseness strategy. Should TOEFL scores be used for placement in language training, those students whose scores are below 417 should

be placed in one class. Alternatively, for placement TOEFL should be accompanied by an additional test, such as an interview. It is indeed not recommended to base placement merely on TOEFL scores (Brown, 1996, p. 283). In the case that other tests are not feasible and it is essential to establish another class level, the score of 400, which is close to the maximum score which can be achieved by using test-wiseness strategy according to research by Allan (1992), and Yang (2000), can be used to divide the levels with caution.

CONCLUSION

TOEFL scores are widely used to measure students' English proficiency for placement, however there is potential for misinterpreting the scores, which can result in misjudgment or misplacement. Random guesses and test-taking strategies are two contributors to such misinterpretation. However, this study has predicted the maximum scores obtained through random guesses and test taking strategies combined, and discovered that starting from 417, all factors other than English proficiency have been eliminated.

There are some limitations to the current research. While the interval between the first and second tests, as well as the second and third tests, was controlled, the exposure to learning could not be monitored. If all test takers included in the sample were prevented from preparing before the three tests, the result would be more accurate. Therefore, there is room for further, improved research in this area. In addition, the Standard Error of Measurement used in analyzing the data was

provided by ETS, where the sample used to analyze it did not include participants in this research. Future research is encouraged to use Standard Error of Measurement obtained from the same data used for the data analysis. Consequently, the result will be more representative. Finally, the raw scores were converted to TOEFL scores by using the conversion table provided by Phillips (2003, p. 258). Using the real conversion figures from ETS, to which the authors did not have access, will definitely improve the quality of the research.

REFERENCES

Alderson, J. C. (2007). The challenge of (diagnostic) testing: Do we know what we are measuring? In J. Fox, M. Wesche, D. Bayliss, L. Cheng, C. E. Turner, and C. Doe (Eds.), *Language Testing Reconsidered* (pp. 21-39). Ontario: University of Ottawa Press.

Allan, A. (1992). Development and validation of a scale to measure test-wiseness in EFL/ESL reading test takers. *Language Testing*, *9*, 101-119.

Bachman, L. F., & Palmer, A. S. (1996). Language Testing in Practice: Designing and Developing Useful Language Tests. Oxford: *Oxford University Press.*

Best, J. W., & Kahn, J. V. (2006). *Research in Education (10th Ed.)*. New York: Pearson Education Inc.

Brown, D. (2004). Language Assessment: Principles and Classroom Practices. New York: Longman.

Brown, J. D. (1996). *Testing in Language Programs.* New Jersey: Prentice Hall Regents.

Chalhoub-Deville, M., & Turner, C. E. (2000). What to look for in ESL admission tests: Cambridge

certificate exams, IELTS, and TOEFL. *System, 28*(4), 523-539.

Council of Europe (2001). *Common European Framework of Reference for Languages: Learning, Teaching, Assessment.* Cambridge: Cambridge University Press.

DeLuca, C., Cheng, L., Fox, J., Doe, C., & Li, M. (2013). Putting testing researchers to the test: An exploratory study on the TOEFL iBT. *System,* 41(3), 663-676.

Douglas, D. (2010). *Understanding Language Testing.* London: Routledge.

Ebel, R. L. (1968). Blind guessing on objective achievement tests. *Journal of Educational Measurement*, *5*(4), 321-325.

ETS. (2005). *TOEFL® iBT scores: Better information about the ability to communicate in an academic setting*. New Jersey: Educational Testing Service.

ETS (2010). TOEFL research. *TOEFL iBT Research Insight*, *1*(2). Retrieved April 10, 2017, from https://www.ets.org/s/toefl/pdf/toefl_ibt_insight_slv2.pdf

ETS. (2011). *Test and score data summary for TOEFL® Internet-based and paper-based tests*. New Jersey: Educational Testing Service. Retrieved April 10, 2017, from https://www.ets.org/Media/Research/pdf/TOEFL-SUM-2010.pdf

ETS. (2011a). TOEFL program history. *TOEFL iBT Research Insight*, *1*(6). New Jersey: Educational Testing Service. Retrieved April 10, 2017, from https://www.ets.org/s/toefl/pdf/toefl_ibt_insight_s1v6.pdf.

ETS (2016). *TOEFL ITP® reliability table*. Retrieved April 10, 2017, from https://www.ets.org/s/toefl_itp/ pdf/ toefl_itp_score.pdf

Frisbie, D. A. (1988). Reliability of scores from teacher-made tests. *Educational Measurement: Issues and Practice*, *7*(l), 25-35.

Gear, J., & Gear, R. (1996). *Cambridge preparation for the TOEFL test (2ⁿᵈ Ed.).* Cambridge: Cambridge University Press, Cambridge.

Hatch, E., & Lazaraton, A. (1991). T*he research manual: Research design and statistics for applied linguistics*. Boston: Heinle & Heinle Publishers.

Heffernan, N. (2006). Successful strategies: Test-taking strategies for the TOEFL. *The Journal of Asia TEFL*, *3*(1), 151–170.

Kashkouli, Z., & Barati, H. (2013). Type of test-taking strategies and task-based reading assessment: A case in Iranian EFL learners. *Procedia - Social and Behavioral Sciences*, *70*, 1580-1589.

Kokhan, K. (2012). Investigating the possibility of using TOEFL scores for university ESL decision-making: Placement trends and effect of time lag. *Language Testing, 29*(2), 291-308.

McManus, I. C. (1992). Does performance improve when candidates resit a postgraduate examination? *Medical Education*, *26*(2), 157–162.

Millman, J., & Bishop, C. H. (1965). An analysis of test-wiseness. *Educational and Psychological Measurement, 25*(3), 707- 726.

Mustafa, F. (2015). Using corpora to design a reliable test instrument for English proficiency assessment. In *Proceedings of the 62ᵗʰ TEFLIN International Conference* (pp. 344-352). Denpasar, Indonesia: Udayana University Press.

Mustafa, F., & Apriadi, H. (2016). DIY: Designing a reading test as reliable as a paper-based TOEFL designed by ETS. In *Proceedings of the 1st English Education International Conference* (pp. 402-407). *B*anda Aceh, Indonesia: Syiah Kuala University Press.

Nijenkamp, R., Nieuwenstein, M. R., De Jong, R., & Lorist, M. M. (2016). Do resit exams promote lower investments of study time? Theory and

data from a laboratory study. *PLoS ONE*, *11*(10), 1–19.

Nisbet, D. (2002). *Language learning strategies and English proficiency of Chinese university students* (Unpublished Doctoral thesis), Regent University, United States.

Phillips, D. (2003). *Longman Preparation Course for the TOEFL. New York:* Pearson Education.

Pyle, M. A., & Page, M. E. M. (1995). *Cliffs TOEFL Preparation Guide* (5th ed.). Lincoln, NE, United States: CliffsNotes Inc.

Reid, F. (1977). An alternative scoring formula for multiple-choice and true-false tests. *Journal of Educational Research, 70*(6), 335-339.

Rosenfeld, M., Oltman, P. K., & Sheppard, K. (2004). *Investigating the Validity of TOEFL: Criterion-related Strategies*. New Jersey: Educational Testing Service.

Sabarun. (2012). The students' scores on the different Institutional TOEFLs at the sixth English Department students of the Palangka Raya State Islamic College. *Educate*, *1*(2), 30-43.

Spolsky, B. (1990). Prehistory of TOEFL. *Language Testing*, *7*(1), 98–118.

Takagi, K. (2011). *Predicting academic success in a Japanese international university* (Doctoral thesis). Available from Electronic Thesis and Dissertation (ETD) at Temple University Libraries. (Record No. 81713)

Tannenbaum, R. J., & Baron, P. A. (2012). *Mapping the TOEFL® ITP Tests onto the Common European Framework of Reference*. New Jersey: Educational Testing Service.

Tavakoli, E., & Samian, S. H. (2014). Test-wiseness strategies in Paper-baseds and IBTs: The case of EFL test takers, who benefits more? *Procedia - Social and Behavioral Sciences, 98*, 1876-1884.

Thorndike, R. L. (1951). Reliability. In E. F. Lindquist (Ed.), *Educational Measurement* (pp. 560-620). Washington: American Council on Education.

Wells, C. S., & Wollack, J. A. (2003). *An instructor's Guide to Understanding Test Reliability.* Madison: University of Wisconsin.

Yang, P. (2000). *Effect of test-wiseness upon performance on the Test of English as a Foreign Language* (Doctoral thesis). Available from National Library of Canada database. (Record No. 26401474)

Young, D. J. (1991). Creating a low-anxiety classroom environment: What does language anxiety research suggest? *The Modern Language Journal, 75*(4), 426-437.

Wainer, H., & Lukhele, R. (1997). *How Reliable is the TOEFL Test?* New Jersey: Educational Testing Service.

Way, W. D., & Reese, C. M. (1991). *An investigation of the use of simplified IRT models for scaling and equating the TOEFL test.* New Jersey: Educational Testing Service.

Nationalist Vs Islamic: The Dynamic of *Politik Aliran* in Post-Suharto Indonesia

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ABSTRACT

Democracy in post-Suharto Indonesia is dynamic, especially in terms of electoral politics. Some scholars assume that *politik aliran* (political streams) is still continued, but others believe it has ended. In this article, we examine the dynamic of *politik aliran* in the 1999, 2004 and 2009 general elections. It is widely recognised that the votes of both Nationalist and Islam political parties declined from election to election. This study aims to analyse the continuity and change both of Nationalist and Islamic parties in Indonesia. The results of the study suggest that electoral politics based on *politik aliran* in post-Suharto Indonesia continues, but the number of votes for neither Islamic nor for Nationalist parties have changed. The balance of power between Islamic parties and Nationalists parties is expected to change.

Keywords: Indonesia, Islam, nationalist, party, *politik aliran*, volatility

INTRODUCTION

Politik aliran (political streams) in Indonesia refers to political cleavages. Its implicit meaning carries a note of socio-religiosity or *santri-abangan-priyayi*, a form of political institution such as Islamic and Nationalist political parties. From the first democratic elections held in 1955 until the elections of 1971, 1977, 1982, 1987, 1992, 1997 under a repressive New Order regime, scientists considered that *politik aliran* was the

determinant factor that affected political behaviour (Aminuddin, 2016; Naharuddin, 2016; Trihartono & Patriadi, 2016). *Politik aliran* also continued in post-Suharto Indonesia (Baswedan, 2004a, King, 2003, 2004b, Trihartono & Patriadi, 2016).

According to King (2003), in some regions, the number of votes for parties in the 1999 election was similar to that in 1955 when the election was marked by *politik aliran*. Using King's method, Baswedan compared the 1999 and 2004 elections in terms of the pattern of voter support and found a significant number of votes for Islamic parties in every town and district, with a majority of Moslem, Nationalist and Christian parties getting strong support from PDI -P *Partai Demokrasi Indonesia Perjuangan* Indonesian Democratic Party-Struggle) supporters (Baswedan, 2004b). In the 2009 election, however, voter loyalty to these parties dwindled (Nurjaman, 2017).

Saiful Mujani (2007); William Liddle; Wawan Sobari (2016) argued against this, stating that the influence of religious orientation on the vote for Islamic parties in the post-Suharto election was not significant. Wawan Sobari stated, "The Javanese phrase '*anut grubyuk*' was mentioned by voters as one of the reasons for voting the way they did" (Wawan Sobari, 2016, p. 249). On their part, Liddle and Mujani found that leadership was a significant factor in political behaviour as a consequence of the development of the mass media, especially television, in rural areas (Mujani & Liddle, 2010). Another study also found that "Information and Communication

Technology (ICT) has the highest impact as the best option during the campaign and more effective and improve monitoring of the progress of the party" (Yaacob, Ambong, Endut, & Amin, 2014, p. 1). Nevertheless, we assume that *politik aliran* still exists , although there have been changes from one election to the next.

In this article, I seek to examine the votes for both Nationalist and Islamic block parties at the national level. A study of block parties in the electoral arena is very important for several reasons: first, the dynamic of electoral politics will affect the issues of the electoral campaign; second, a change in the number of votes within block parties will affect policy outcomes in parliament; third, such a change will affect the party coalition and the party in power.

LITERATURE REVIEW

Democracy and Political Party

Political parties play an important role in a modern democracy (representative democracy). Scholars have repeatedly stressed the importance of political parties and see it as the main criterion for measuring democracy, especially in transition because "during the transition and over subsequent electoral periods, political parties have emerged in these democracies to select candidates, mobilize constituents, contest elections, and form governing coalitions" (Lupu, 2013, p. 1340). However, nations with a long tradition of democracy will remain stable, as, according to Wittenberg (2013), "these countries and the voters

living there accumulate experience with democracy and a democratic party system, however, levels of volatility are expected to decrease" (Wittenberg, 2013, p. 22).

Political parties also provide issues and a choice of leadership for the public, which they promise will be implemented when they come to power. Schattsneider stated that it is clear that political parties create democracy, and modern democracy is unthinkable without the existence of political parties (Saglie & Heidar, 2004, p.1). However, Veenendaal (2016) has challenged this argument, stating:

> *. . . the Schattschneider thesis may hence be empirically incorrect, from a more normative perspective the idea that parties fulfill a crucial role in a representative democracy seems to be at least partially confirmed by the present analysis of Palau. In the case of Palau, the absence of parties is strongly related to the significance of clan relations and personalistic politics, and as several respondents indicated these alternatives to political parties have a largely negative impact on Palauan politics.* (Veenendaal, 2016, p. 8)

Regarding the transition from oligarchic to democratic societies, Acemoglu (2004) offered a different argument i.e.

> *. . . in a certain moment in time an oligarchic regime may have a comparative advantage over a democratic one in terms of the preservation of property rights, thanks to its greater capacity and incentives to set lower tax rates on the elite's wealth.* (Mejía & Posada, 2007, p. 7)

This argues that the previous regime prepares for a further step of democracy, particularly democratic transition into the second phase of consolidation of democracy. Briefly, when a democratic regime and the effective functioning of democratic institutions have been established and have legitimacy, then the format and function of the party system become very important.

> *. . . almost 30 years ago, 'the stability of the party system [rather than the parties] was the really decisive factor for the stability of the whole system in all democratic systems. . . .its findings have important implications in terms of how democracy should be promoted. . . should be approached with a preferential eye on party systems rather than merely on parties, as has usually been the . . . focusing on party systems must remain a basic if not the central theme for examining the survival of liberal democracy.* (Casal Bértoa, 2016, p. 20)

This means that the stabilisation of the party and the party system is very important for the government. The stabilisation of the party and party system is correlated with the stabilisation of political cleavage; the cleavage determines political behaviour or 'the frozen cleavages'. Similar to the last pint is "the basic cleavages that undergird party support over the medium or long

term: the national revolution that produced a cleavage between the central state and peripheral communities and between the central state and a supranational church; and the industrial revolution that produced an urban/rural cleavage, and later a worker/employer cleavage" (Hooghe & Marks, 2017, p. 3).

Regarding "the frozen cleavages", many researchers have to accept the fact that the cleavage not frozen anymore due to decreasing alignment and increasing individual emancipation. A general process of de-alignment occurs across time, indicated by the decreasing association between political preferences on the one hand and class, religion and regime preferences on the other. Regarding how religious cleavage works in shaping political behaviour, Bargsted wrote:

> The level of religiosity – as indicated by the intensity of religious feelings, beliefs, or behaviors – can also shape political preferences. . . . found that after extensive statistical controls more frequent worship is associated with right ideological self-placement and that the effect was stronger than that of class. Church attendance, the most commonly used indicator of religiosity, is often seen as a strong determinant of rightist positions . . . . (Bargsted, 2012, p. 6)

In addition, the impact of the emancipation of individual voters over time has meant that people no longer vote for the party of their social group. In order to respond to these circumstances, political parties began to look for other social groups and tried not to focus solely on their social affiliations. Some Islamic parties used the issue of poverty or low income to politicise Islam (Choi, 2017). Political issues became a more determinant effect as a base of their choice in the election, as various scholars pointed out that the decline in voting structure went hand in hand with the growing issue of voting. Furthermore, "Strengthening of ethnic tolerance among the youth involves educating them on the cultural differences and issues of interethnic relations through the mainstream news media" (Tamam et al., 2008, p. 1).

Political Cleavage in Indonesia

Many scholars have shown that religious cleavage is the most significant factor in studying electoral politics. Trihartono and Patriadi (2016) pointed out the importance of religious cleavage, especially Indonesians' electoral politics. "Social cleavages are widely assumed to have a close link with the party system. In a plural society like Indonesia, in which primordial sentiments frequently emerge, the cleavages do not only draw upon different social groups, .., its election and party system have been frequently analyzed through cleavages framework" (Trihartono & Patriadi, 2016, p. 26). Conventional wisdom regarding the effect of social cleavages maintains that greater social cleavage diversity leads to greater party system fragmentation (Raymond, Huelshoff, & Rosenblum, 2016, p. 2).

Cleavage theory, originated by Lipset and Rokkan, conceives a national party system as the expression of underlying social conflicts (Hooghe & Marks, 2017, p. 3). Cleavages can be derived from economic class, religion, ethnicity, language, culture and geography, among others. But the determinant cleavage comes from religion, as Knutsen (2012) pointed out: "Some important political value orientations can be derived from the structural cleavages incorporated in the well-known model of Lipset and Rokkan (1967). The religious cleavage is related to religious versus more secular values" (Knutsen, 2012, p. 4). However, religious leaders in diverse societies competing along a dominant versus minority religious cleavage often seek to incorporate overlapping ethnic and/or class issues into their struggles (Raymond, 2016, p. 6).

Just as other countries have frozen cleavage based on religion, Indonesia too has a basic cleavage based on religious behaviour, namely political streaming or *politik aliran* in Indonesian. *Politik aliran* is a generic term used to refer to the term political cleavages, even though it may be somewhat less precise. In the absence of an equivalent term, *politik aliran* is used to give meaning to the term political cleavages. It was suggested as a political concept by Clifford Geertz (Trihartono & Patriadi, 2016, p. 3) and despite garnering some amount of criticism, it continues to be a major tool in the study of Indonesian politics.

The pattern of *politik aliran* gives implicit meaning to the socio-religious term, *santri-abangan-priyayi*, a type of political institution such as Islamic or Nationalist parties. "Those distinctions have been carefully elaborated in Indonesia, most famously with Clifford Geertz's differentiation of *abangan* (traditional, less orthodox) and *santri* (modernist and more pious, generally divided into urban and rural variants) sociopolitical *aliran* (streams)" (Weis, 2010, p. 84). "*The Religion of Java*", the seminal book by Geertz (1959) continues to be cited up to today in social discourse, politics and culture in Indonesia, providing the main reference for scientists for understanding Java.

Briefly, *santri* is a devout Moslem group that seeks to ensure that Islam is the basis or foundation for political groupings, such as political parties and the state. Therefore, Islamic political parties were formed, and in the 1950s it was attempted to govern Indonesia based on Islam . On the other hand, *abangan* is a nominal Moslem group who believe that Islam is not important in socio-political life. Thus, it should come as no surprise if *abangan* eventually become more open to other dominant political ideology such as communism. The third group, *priyayi*, is a Moslem group who are culturally close to *abangan*; what sets them apart is the way they behave, which is more refined. In addition, many of them are government officials.

METHODS

The aim of this study was to gain greater insight into the nature of *politik aliran* (political streams) by exploring a secondary set of electoral data. To examine the viability of the arguments that have been derived from the theory, this study conducted a qualitative analysis of party votes for both Islamic and Nationalist parties in Indonesia after the fall of Suharto in 1998 and its effects on the dynamic of *politik aliran* (political streams) in the following period.

To fulfil data collection requirements, the research used secondary data. The main databank was obtained from the Indonesian National Electoral Commission (KPU) and others sources such as books, documents and journals. Data that needed to be calculated were the Nationalist block party votes, Islamic block party votes and the volatility of the party block votes. Data on the secondary electoral results of the national election were collected from the Internet website, www.kpu.go.id. A qualitative method of analysis was used to assess whether political cleavage factors (Islamic vs Nationalist) related to the election result can explain differences in the volatility of block votes for the parties in each Indonesian election.

Although this study will not provide a conclusive answer to the question of whether the strength of cleavage inhibited or aggravated electoral volatility, the analysis will hopefully provide useful insights into how different features of party ideology affect the dynamics of *politik aliran* (political streams). The in-depth studies will be written about the Islamic block party (Modernist and Traditionalist), analyzing the volatility of votes that induced a change in *politik aliran* (political streams) and traditionalist parties, which continue *politik aliran* (political streams) today despite the decrease in their votes. Electoral results of both modernist and traditionalist Islamic parties have been relatively well-documented.

RESULTS

Politik aliran in post-Suharto Indonesia persists even though some of its dynamics correlate with the volatility of the votes for the parties from one election to the next. The results of the 1999 election were congruent with that of the 1955 election due to the fact that many of the parties in the 1950s were both Nationalist and Islamic parties. In 1999, there were more votes for the Nationalist block than for the Islamic block, but in 2004, there was a slight change, and the votes for the Nationalist block decreased somewhat. In 2009, the votes for the Islamic block decreased significantly (10.83%) (Table 1).

Continuity of *Politik Aliran*: Total Vote of Nationalist Parties and Islamic Parties Persist

The first national election in 1955 resulted in a party system structured by *aliran* (Ufen, 2006, p. 28) and this trend continued in the post-Suharto Indonesia elections. The National Mandate Party (*Partai Amanat Nasional*, PAN) and the National Awakening Party (*Partai Kebangkitan Bangsa*, PKB)

for example, had strong affinity with two parties from the 1950s, the *Masyumi* and *Nahdlatul Ulama* (NU). PPP (*Persatuan Pembangunan*, United Development Party), and Golkar are state-sponsored products of the New Order regime, while the Prosperous Justice Party *(Partai Keadilan Sejahtera*, PKS) is "the prominent new political trend in the mid-2000s in urban Indonesia" (Okamoto, 2014, p. 9), emerging out of a campus-based religious movement.

Most of the parties in post-Suharto Indonesia, in both the Nationalist and Islamic block, were a continuation of the 1955 election. However, in the 1999 election, most of the voters chose Nationalist parties such as *Partai Demokrasi Indonesia Perjuangan* (PDIP, Indonesian Democratic Party-Struggle) and *Golongan Karya* (*Golkar*, The Functional Group of Parties). PDIP was the majority winner with 35,689,073 votes (33.74%), while, Golkar as a party ruler in the time of the New Order government, was the second plurality winner after PDI, with 22.44%. The hegemonic party, Golkar, lived on after the fall of the Suharto regime although the numbers were volatile, at 22.4% in 1999, 21.58% in 2004 and 14.45% in 2009. However, during the New Order period, Golkar always gained the average vote of more than 60%.

On the other hand, the number of votes for the Islamic block parties in post-Suharto Indonesia was relatively the same, although the share of the votes among the Islamic parties in the block changed from one election to the next. Moreover, although Indonesia has a majority Moslem (80%) population (Baswedan, 2004a p. 1; Buehler, 2009, p. 1), the share of the votes for the Islamic block parties was not significant. In 1999, the vote shares for the Islam block parties was 38.10%, and this increased to 2.22% in 2004. Nevertheless, the increasing votes for the Islamic block parties, from 38.10% (1999) to 40.32% (2004) was short-lived as in the next election, the number of votes for the Islam block parties dropped dramatically from 40.32 % to 29.49%. With that, the Islamic block parties lost about 10.83% of the vote in 2009 (Table 1). In comparison, in the 1955 election, Masjumi and NU as the Islamic parties of the era, obtained approximately 43.70% of the votes (Trihartono & Patriadi, 2016, p. 30).

Although the votes for the Islamic parties fluctuated, most the parties, such as *Persatuan Pembangunan* (PPP, United Development Party), *Partai Kebangkitan Bangsa* (PKB, National Awakening Party), Partai Keadilan Sejahtera (PKS, Prosperity and Justice Party) and *Partai Amanat*

Table 1

Comparison of the number of votes obtained by the Nationalist vs the Islamic blocks of parties

	Votes (%)					
	1955	1999	2004	Change	2009	Change
Islamic	43.70	38.10	40.32	+ 2.22	29.49	- 10.83
Nationalist	56.3	61.90	59.68	- 2.22	70.51	+ 10.83

Source: Research Findings

Nasional (PAN, National Mandate Party) endured the shifting political climate.

In 1999, PPP had listed the principles of Islam as its party ideology. This party survived from the New Order era party, which was originally a consolidation of some of the parties based on religion. Since the PPP was the result of this merger, the elite of PPP were a combination of modernist and traditionalist leaders. Meanwhile, *Partai Keadilan Sejahtera* (PKS, Prosperity and Justice Party) had attracted much attention due to its spectacular increase in the number of votes in 2004. The former name of the party was Justice Party (PK, 1999), but the name had to be changed due to a low electoral threshold of 2.5%. At the time, the party received only 1.7% of the votes, but this number increased four-fold to 7.3% in the next election in 2004, and then increased again slightly in 2009 to stand at 7.9%. The party was led by a cadre of passionate and highly educated leaders of Islamic student organisations. PKS successfully utilised organisation and campaign techniques introduced by Western democracies. This encouraged other Islamic parties to undertake similar efforts to revamp to more modern campaign strategies.

Another Islamic party, *Partai Kebangkitan Bangsa* (PKB, National Awakening Party), was a revamp of *Nahdlatul Ulama* (NU), the biggest Islamic mass organisation in Indonesia, and was proposed by Abdurahman Wahid (Gus Dur). It was one of the Islamic parties that drew strength and support from the constituencies; however, this party lacked organisation and succumbed to many internal conflict among its elites. In the 1999, 2004 and 2009 general elections, PKB's number of votes was, respectively 7.12%, 6.47% and 6.01%. It would be no exaggeration to assert that PKB and NU were the same party as Gus Dur, the founder of PKB, was also a central figure in NU.

Changes to *Politik Aliran*: The Volatility of Islamic Block Party Votes

Parties such as PBB, PKS and PAN were classified as modernist Islamic parties. On the other hand, PKB, PNU, PNUI and PKNU were classified as traditionalist Islamic parties. Islamic parties in post-Suharto Indonesia had no stable electoral performance due to reforms to the electoral system and the emergence of new parties. Núñez, Simón and Pilet pointed out that "volatility does indeed increase the likelihood of reforming the electoral system but only when volatility due to new parties is considered" (Núñez, Simón, & Pilet, 2017, p. 15).

Moreover, in the post-Suharto election, modernist Islamic parties showed an increasing trend in their electoral performance compared to the traditionalist parties. However, the total number of Islamic parties, whether modernist or traditionalist, from one election to the next was slightly equal. The number of votes for the traditional Islamic parties (minus PPP) in the 1999, 2004 and 2009 general elections, respectively, were 14.35%, 14.59% and 7.95% (Table 2). The number of votes for PPP itself, respectively was 10.71%, 8.16%

and 5.32%. In this article, PPP is classified as a traditionalist Islamic party, since many modernist Islamic voters swung their vote to the modernist party, PAN.

Table 2
Comparison vote of modernist Vs traditionalist Islam parties in 1999, 2004 and 2009 general elections

Islamic Parties	1999 Election Year			2004 Election Year			2009 Election Year		
	Party Name	Vote (%)	Total Vote (%)	Party Name	Vote (%)	Total Vote (%)	Party Name	Vote (%)	Total Vote (%)
Modernist	PBB	1.94		PBB	2.56		PBB	1.79	
Islamic	PK	1.36		PKS	7.20		PKS	7.88	
Parties	PAN	7.12		PAN	6.47		PAN	6.01	
	PDR	0.40		P. Merdeka	0.74				
	Others	1.60	**12.42**	Other	0.60	**17.57**	Other	0.54	**16.22**
Traditionalist	PKB	12.61		PKB	11.98		PKB	4.94	
Islamic	PNU	0.64		PNUI	0.79		PKNU	1.47	
Parties	Other	1.10	**14.35**	Other	3.19	**14.59**	Other	1.54	**7.95**
	PPP	10.71		PPP*	8.16		PPP	5.32	
	Others	0.62	**11.33**	Other		**8.16**	Other		**5.32**
Total Islam			**38.10**			**40.32**			**29.49**

Source: Research Findings

DISCUSSION

In countries that have advanced in the process of democracy, inter-party rivalry originates from the split between left and right ideology. However, inter-party rivalry in Indonesia is not rooted in socio-economics as is true for Western Europe and other developed countries. Block parties in Indonesia are anchored in political streams (*politik aliran*), that is, they are catagoried along two poles, *santri* and *abangan* (Trihartono & Patriadi, 2016). *Santri* parties lean towards Islam in their politics, while *abangan* parties tend to be Nationalist parties.

In the context of the 1999 election, which was clearly different in trend, according to Weis (2010) *politik aliran* "could not really manifest itself in the more urban, mobile, educated society of 1999, patterns of mobilisation still tended to emphasize loyalties either to modernist Islam or to a traditionalist-nationalist alliance" (Weis, 2010, p. 89). The first election in post-Suharto Indonesia, in 1999, voted in the nationalist block parties, with 61.90% of the votes going to them, while the Islamic block parties garnered only 38.10% of the total votes. Some of the Islamic parties, such as PPP and PKS

tried to respond to the electoral condition by promoting stronger Islamic ideology and succeeded in improving their electoral performance in the 2004 election, increasing the number of votes they received by 2.22%. It is clear that *politik aliran* works for the Indonesian electoral system as a frozen cleavage (Trihartono & Patriadi, 2016). In order to determine whether or not there is a correlation between the increase in the votes received by the Islam block parties and the ideology they promoted still needs to be proven.

However, in 2004, the Islamic block parties decreased significantly from 40.32% to 29.49% as voters were extremely disappointed fin them. According to Naharuddin (2016), Ufen mentioned that its significance began to diminish and referred to the de-alignment trend indicated by the rise of 'presidentialised' parties and growing intra-party authoritarianism. In addition, in the internal party, especially Islamic Traditionalist parties, there was often conflict among the elite in addition to political patronage and corruption: "the party was fragmented organizationally and susceptible to exogenous intrusions such as access to state patronage, corruption and electoral changes" (Kikue, 2011, p. 141). The decrease in the number of votes for the Islamic block parties was one of the explanations from some scholars given in claiming the end of *politik aliran* (Liddle & Saiful Mujani, 2007; Wawan Sobari, 2016). However, it should be remembered that although the number of votes for the Islamic block parties decreased, some

Islamic parties such as PKB, PAN, PPP and PKS have survived to this day.

The weakening of *politik aliran* (political streams) has led to changes in the power among political parties, and this needs further explanation due to cause-and-effect dynamic of the party system. The decline in voter alignment in post-Suharto Indonesia also needs further explanation, whether it is describing the symptom of the electoral market in the election or not. Changes in the electoral market can be seen from things such as changes in social structure, structural de-alignment and any decline in party identification, change in value orientation, competition issues and party crises. Furthermore, since electoral volatility is mostly due to higher voter distrust in the party, it appears as pragmatic behaviour in society and is welcomed by the party as pragmatism in the form of vote-buying. High-cost politics was used as a bridge to reach voters outside the traditional base as a characteristic of the *catch-all* party. The *catch-all* party indulging in high-cost politics eventually took on *cartel-party* characteristics, and had an impact on the number of corruption cases involving members of the Representative Board.

CONCLUSION

Politik aliran (political streams) in post-Suharto Indonesia was continued, but with some changes. The changes in *politik aliran* correlated with the volatility of individual parties, and this in turn contributed to the volatility of the block of parties. Some parties, neither Nationalist nor Islamic, lost

votes in subsequent elections. Volatility mostly came from the major parties such as PDIP, *Golkar*, *Demokrat* (Nationalist), PPP, PKB, PAN and PKS. Among the Islamic block of parties, both Modernist parties and Traditionalist parties experienced volatility, but the Traditionalists saw higher volatility than the Modernists, especially in 2009. Parties that have survived from 1999 to the present time can be categorised as nstitutionalised parties, meaning that they have roots in the community.

The changes to *politik aliran* correlate with the fluctuation in the party votes from one election to the next, and this consequently changed the balance of block parties between the Islamic and Nationalist blocks. Even though the electoral performance of Islamic block parties is going to decline *politik aliran* has not ended. Some Islamic parties still exist, although the number of votes they receive is not significant. Nevertheless, they can survive. However, the strength of *politik aliran* in structuring political behaviour in post-Suharto Indonesia has tended to decline.

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REFERENCES

Aminuddin, M. F. (2016). Electoral system and party dimension assessment in democratic Indonesia. *Jurnal Ilmu Sosial dan Ilmu Politik*, *20*(1), 1–15.

Bargsted, M. A., & N. S. (2012). What happens to social cleavages when restored democracies consolidate? Social cleavages and political preferences in Chile, 1995-2009. *Proceeding of the Conference of the World Association Public Opinion Research* (pp. 1–30). Bogotá, Colombia: The World Association Public Opinion Research.

Baswedan, A. R. (2004a). Political Islam in Indonesia: Present and future trajectory. *Asian Survey*, *44*(5), 669–690.

Baswedan, A. R. (2004b). Sirkulasi suara dalam pemilu 2004. *Analisis CSIS*, *33*(2), 173–189.

Buehler, M. (2009). Islam and democracy in Indonesia. *Insight Turkey*, *11*(4), 51–63.

Casal Bértoa, F. (2016). Political parties or party systems? Assessing the "myth" of institutionalisation and democracy. *West European Politics*, *40*(2), 402–429.

Choi, J. (2017). The influence of poverty on the politization of Islam in Indonesia. *Asian Survey*, *57*(2), 229–248.

Hooghe, L., & Marks, G. (2017). Cleavage theory meets Europe's crises: Lipset, Rokkan, and the transnational cleavage. *Journal of European Public Policy*, *25*(1), 109–135.

Kikue, H. (2011). The end of political Islam? A comparative analysis of religious parties in the Muslim democracy of Indonesia. *Journal of Current Southeast Asian Affairs*, *30*(3), 133–159.

King, D. Y. (2003). *Half-hearted reform: electoral institutions and the struggle for democracy in Indonesia*. Westport, Connecticut, USA: Greenwood Publishing Group.

Knutsen, O. (2012). Conflict dimension in the West European party systems: A Comparative study

based on European values study 2008. *Proceding of the XXII World Congress of Political Science* (pp. 1–36). Madrid: RC06 Political Sociology.

Lupu, N. (2013). Political parties and uncertainty in developing democracies. *Comparative Political Studies*, *46*(11), 1339–1365.

Mejía, D., & Posada, C. E. (2007). Populist policies in the transition to democracy. *European Journal of Political Economy, 23*(4), 932–953.

Mujani, S., & Liddle, R. W. (2007). Leadership, party and religion: Explaining voting behavior in Indonesia. *Comparative Political Studies*, *40*(7), 832–857.

Mujani, S., & Liddle, R. W. (2010). Personalities, parties, and voters. *Journal of Democracy*, *21*(2), 36–49.

Naharuddin, A. (2016). Elections in Indonesia after the fall of Soeharto 11. *International Journal of Management and Applied Science*, *2*(1), 162–165.

Núñez, L., Simón, P., & Pilet, J. B. (2017). Electoral volatility and the dynamics of electoral reform. *West European Politics, 40*(2), 378–401.

Nurjaman, A. (2017). The end of political parties in Indoensia: The case of weakening voter loyalty in the local level, Malang. *Medwell Journal, The Social Sciences*, *12*(2), 342–346.

Okamoto, M. (2014). Jakartans, Institutionally volatile. *Journal of Current Southeast Asian Affair*s, *33*(1), 7–27.

Raymond, C. D. (2016). Not all social cleavages are the same: On the relationship between religious diversity and party system fragmentation. *Politics and Religion, 9*(2), 364–388.

Saglie, J., & Heidar, K. (2004). Democracy within Norwegian political party. *Party Politics, 10*(4), 385–405.

Tamam, E., Yee M. Y. T., Idris F., & Hamzah, A. (2008). News media socialization and ethnic tolerance among Malaysian youth. *Journal of Social Sciences & Humanities, 16*(1), 65–75.

Trihartono, A., & Patriadi, H. B. (2016). The 2014 Indonesian general election and beyond: Melting "frozen" cleavages. *Asian Journal of Comparative Politics*, *1*(1), 25–43.

Ufen, A. (2006). Political parties in post-Suharto Indonesia: Between politik aliran and 'Philippinisation'. *GIGA Working Paper, 37* (pp. 1–35). Hamburg: Giga Institute of Asian Studies.

Veenendaal, W. P. (2016). How democracy functions without parties. *Party Politics*, *22*(1), 27–36.

Wawan Sobari. (2016). Anut Grubyuk in the voting process: The neglected explanation of Javanese voters (preliminary findings). *Southeast Asian Studies*, *5*(2), 239–268.

Weis, M. L. (2010). Southeast Asia's Muslim majority democracies elections and Islamism outside the MENA region. *Taiwan Journal of Democracy*, *6*(1), 81–106.

Wittenberg, J. (2013). How similar are they? Rethinking electoral congruence. *Quality and Quantity*, *47*(3), 1687–1701.

Yaacob, R., Ambong A.M., Endut M., & Amin A. (2014). Information and communication technology (ICT) implementation in Malaysian political parties, *Journal of Social Science and Humanity, 4*(3), 189–193.

The Malaysian AEC Professionals Work Culture Could Improve Organizational Team Productivity during Industrialized Project Delivery

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ABSTRACT

There is miscoordination in Malaysian construction project delivery resulting in many variation orders (v/o) in the industry. Hence, the Construction Industry Transformation Program 2016-2025 (CITP) is developed to facilitate the future of Malaysian construction industry. This paper presents the results of study on factors in Malaysian architecture-engineering-contractor (AEC) professionals work culture that could improve Malaysian organizational team productivity during industrialized project delivery. This is a case study involving observation and interviews of 14 participants in a Malaysian organization to identify the cultural criteria for successful AEC collaboration. The investigation covers work culture preferences, the inflows and outflows of tacit knowledge through interdependent tasks, and the collaboration processes and related technologies used. Results indicate that four operating characteristics occur in Malaysian building projects. Integration of culture knowledge with Building Information Modeling (BIM) in projects could alleviate better productivity. Finally, this study recommends potential work culture criteria that could uplift Malaysian AEC technology, skill, competencies and expertise, and provide higher incomes commensurate to the construction workforce.

Keywords: AEC, cultural knowledge, integrated design management, knowledge management, sustainable design informatics, work culture

INTRODUCTION

Many developing countries are experiencing significant escalation of variation orders in their building projects (Mhando, Mlinga, & Alinaitwe, 2017; Kazaz, et al., 2012; Mohammad, et al., 2010). Among the significant causes of variation orders in

projects are change of design by owner and consultants (Dixit et al., 2017; Memon, et al., 2011), lack of professional experience in handling projects (Doloi et al., 2012), poor coordination (Yong & Nur, 2012) and information, and payment delays (Kikwasi, 2013). Arain and Low (2005) highlighted that these variation orders were 65.29% sourced from the architectural variations that occurred during the design development and contract implementation stage. Here, the study foresees that design changes are a crucial factor in escalating the number of variation orders in project.

Buswell et al. (2007) saw that application of BIM would support industrialized productivity process. It could be enhanced when professionals' collaborative culture apply technological and professional components to reduce waste. Malaysia is interested in utilizing BIM and industrialized construction to facilitate the Construction Industry Transformation Program 2016-2025 (CITP 2016-2025) as a means to direct the future of Malaysian construction industry. There are many attempts by Malaysian Government to encourage Malaysian AEC practices to adopt BIM via the government's pilot projects (Latiffi *et al.*, 2013). The professionals' collaborative culture such as using 2D conventional drawing method aggravates the variation orders in building projects. Without a supporting collaborative tools and processes, AEC professionals are having further miscoordination resulting in escalation of variation orders in building projects. Here, the study identifies a problem gap that needs to be addressed which is miscoordination due to professionals' collaborative culture from design development (DD) to contract implementation stage (CI) resulting in many variation orders (v/o) in construction industry. Therefore, the objectives of the study is firstly, to determine the level of AEC professionals' collaborative culture using CAD visualization tool in construction industry; secondly, to analyze the factors supporting AEC professionals' collaborative culture in improving productivity in industrialized projects; and finally, to propose an AEC professional collaborative cultural model to reduce time and delivery waste during design process in industrialized project.

The paper first introduces the background of the study. Then, the paper presents the literature study on AEC organizational team performance, productivity efficiency, and AEC's work culture. Then, the case study research methodology used is described followed by the results and discussion. The study uses Horii (2005) cultural model-Practice and values dimension to build the study's discussion and includes a conclusion on BIM as professionals' work culture, knowledge management, and knowledge flow as well as the implications of this study.

BIM Work Culture

Many seminal literature anticipate that BIM could be the new work culture for the AEC industry. BIM is believed to be the extended version of the Virtual Design and Construction (VDC) due to similar tenets, components, and procedures (Sacks

et al., 2010). Derived from the Product, Organization and Process (POP) model (Fischer & Kunz, 2004), VDC could furnish multidisciplinary AEC professionals with explicit connections of people functional processes (Jin et al., 1995; Nissen & Levitt, 2002), 4D CAD visualization of schedules, delivery dates, and activities (Kam et al., 2003). VDC uses Industry Foundation Classes (IFC)–an interoperable international standard allowing smooth information exchange between tools for visual interoperability and nD's (Lee et al., 2005) to support accurate decisions for solutions to conflicts (Bouchlaghem, et al, 2005; Fischer & Kunz, 2004).

During fabrication, CAD models are linked to CAD numeric control (CNC) machine to produce speedy, accurate products whether in mass production or small quantities (Knight & Sass, 2010). Hence, they help reduce waste and variation orders. Kam and Fischer (2004) described the POP models as an active visual communicator during the early phase of design for project team members to be aware of the sequenced planned work, schedules, and conflicts. Therefore, the study posits that the POP models could identify early anomalies in assembly and agrees with Kam et al. (2003) that having a visual communicator could increase non-professional awareness and knowledge flow to appreciate design concepts, design rationale, constructability and field issues. The authors agree with Ibrahim and Nissen (2007) that in a complex dynamic environment such as fabrication-construction deliveries, knowledge flow is crucial to eradicate anomalies and re-work between team members. Kam et al. (2003) supported that designers' accurate properties of the product models could enable other team members to re-use data and embed accurate information in their software application to coordinate fabrication process, thus, minimizing rework. Consequently, the authors agreed that IFC in POP models would allow smooth interoperability of data between team members, cut half of the documentation time, and convey accurate information, hence, minimizing rework in the subsequent assembly process.

Productivity Efficiency

Hofstede (1997; p. 10) regarded culture as several layers of mental programming within themselves, corresponding to different levels of culture. These layers are personality, culture, and human nature (Hofstede, 1997). Another layer of culture in societies comprises national culture differences, cultural differences according to region, religion, gender, generation and class, and organizational culture. The authors posit that much of organizational culture is more likely to be influenced by AEC professionals' characteristics such as complacency with 2D traditional method (Fischer, 2006) to deliver projects. This trait is inherited from their earlier tertiary training and previous experiences during projects (Ibrahim & Pour, 2010; Rahimian & Ibrahim, 2011), hence, making them reluctant to accept new ways of delivering projects.

Many scholars highlight that construction waste is getting higher due to lack of professional awareness (Poon, Yu, & Jaillon, 2004), less defined professionals' responsibilities in handling waste (Osmani, Glass, & Price, 2006), and professionals' attitude and behavior in waste management (Begum et al., 2009). Waste in this context is inefficient use of resources and capital which add cost but do not add value to product (Koskela, 2000). Ohno (1988) categorized seven types of industrial waste namely: 1) overproduction, 2) inventory, 3) extra processing steps, 4) motion, 5) defects, 6) waiting, 7) transportation, and 8) making-do waste (Koskela, 2004). Industrialized waste production is influenced by cultural knowledge. The authors also agree with Knight and Sass (2010) that cultural and social factor play equal roles to make these technologies be accepted and validated in the construction industry. Additionally, a study by Abdul Ghafar et al. (2013) posited that organization would depend on teamwork culture, method of knowledge transfer for discontinuous membership in a

building project, and further enhancement of professional education programs. Herewith, we can consider that adaptation of CAD technologies together with professional culture in the early stage of design, could promote effective productive practices to reduce industrialized waste.

AEC Work Culture

The authors see that culture is the prominent factor influencing an organization's productivity. The authors use Horii (2005)'s cultural performance model to analyse the impact of culture in organization. In the culture performance model, Horii suggested two cultural dimensions in organization to be measured: 1) practices dimension- the factors linked to organization structure, level of communication formalization in organization's coordination, control and rules; and 2) values dimension− the behaviour patterns in decision making and communicating information that influence the organization's structure and leadership style.
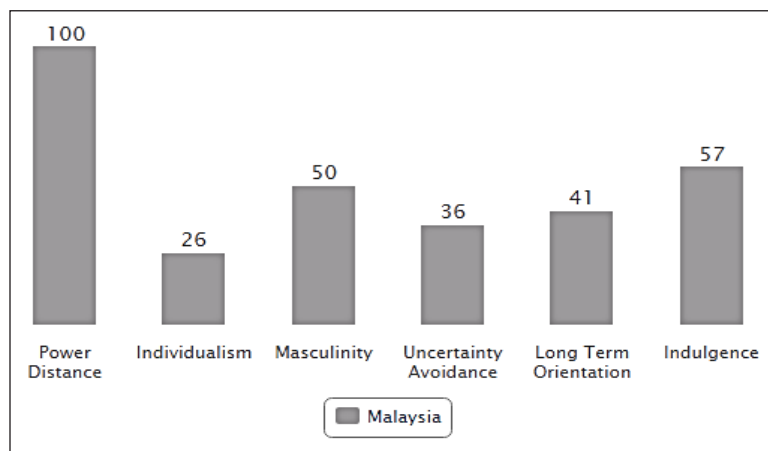
Figure 1. Hofstede's National Culture Model of Malaysia (Hofstede, 2017)

Horii's study posited that organization performance was controlled by national culture preferences such as the Power Distance Index (PDI), Uncertainty Avoidance (UAI) and Individualism Index (IND) (Hofstede, 1997). For instance, a particular national background would prefer to a particular configuration because it fits their implicit norm model and cultural preferences (Figure 1). Hofstede's (1997) high Power Distance Index (PDI) countries are most likely to practice centralization, organization, communication, and non-divisionalized hierarchical configuration (Burton & Obel, 2004) while the level of formalization in an organization is reflected from PDI− (UAI) dimension and low UAI countries prefer to standardized outputs. On the other hand, low Individualism Index (IND) countries would feel uncomfortable in challenging goals but comfortable when they have their mentor's consensus during challenging goals processes. This implicates that AEC professionals could also have their own implicit work culture preference that would affect their of beliefs and values in delivering projects

Studies have found that epistemological characteristics–combination of complex, uncertain and equivocal environment–are conveying poor tacit information to team members especially during formal documentation and negotiation for approval process (Ibrahim & Paulson, 2008). In addition, deficient understanding of interdependencies in multiple workflows (Ibrahim & Nissen, 2007) are hampering knowledge flow and effective assembly of discontinuous members. For instance, the specialist contractor in the fabrication process is denoted as a discontinuous member—coming into the team when needed and leaving when task is completed. This implies that fabrication waste production is likely due to a combination of cultural knowledge differences between professionals and weak interdependent monitoring over the complex multiple workflows. This is making the discontinuous member suffer from knowledge loss phenomenon, hindering the fabrication efficiency, thus, causing unnecessary wastage. The authors speculate that amalgamation of BIM with professional culture and firm monitoring over complex discontinuous membership workflow in the early stage of design could prevent knowledge loss, thus, reduce industrialized waste. In turn, it would facilitate productivity efficiency. In view of the above, the study posits that cultural knowledge and technological support could allow smooth interoperability, ensure accurate information, and minimize rework in subsequent fabrication process towards inhibiting unnecessary wastage.

METHODS

The study employs case study research method and refers to Yin (2009) in developing the case study research design. To further answer the logic of the study's Case Study Research Design (CSRD), the five components proposed by Yin (2009) are used as shown in Table 1.

In building unbiased interpretation of data, the study uses Yin's four test of validation in CSRD. (Refer Table 2)

Table 1
The five components of logic to CSRD (Adapted from Yin, 2009)

Components	Logic
1. The study's question:	The main research question (MRQ) is: How can visualization technology improve productivity efficiency for reducing construction waste? According to Yin (2009) when a research question starts with a how or why, it confirms the appropriateness of use of case study research methodology in a research indicating the essential use of case study as a research technique.
2. Proposition statement:	The study's theoretical proposition: With competent technological support, productivity can be improved by enhanced understanding of cultural knowledge (work culture, knowledge management and professional collaboration) between professionals during design phase, hence, affecting production of waste in industrialized construction. According to Yin (2009; p. 28) "each proposition directs attention to something that should be examined within the scope of study". Propositions could descriptively help explain the systematic and verifiable steps of the theoretical proposition to examine the key components. This proposition is motivated by Abdul Ghafar, et al. (2013) and Abdul Ghafar, Ibrahim and Shari (2014) work culture and cultural knowledge theory in reducing industrial waste.
3. Unit of analysis.	The unit of analysis is a single project team that is Project M. In the study, Project M team has 14 team members consisting of architect, mechanical and electrical engineer, civil and structure engineer, quantity surveyor, sub-contractors, and developer with experiences ranging from a minimum of one to more than twenty years. The project complexity was based on project's characteristics of multidisciplinary practice, practice's attributes (such as organizational style, authority, formalization of communication and organizational hierarchy), the use of BIM technology in delivering project, and comprehension of professionals' value preferences (such as task coordination and decision making).
4. The logic linking data to proposition.	From the theoretical proposition, the study would logically show how it rationalizes the correlation between theoretical operational constructs to consolidate the technique in obtaining data from field work. The theoretical proposition presented six theoretical operational constructs for the study to work on in relation to the CSRD. The operationalized constructs are work culture, knowledge management and professional collaboration. Refer to Table 3.
5. The criteria for interpreting the findings	The study anticipates that 60% of time and delivery waste could be reduced when productivity efficiency value is high (80%), when technology (BIM) and culture (*work culture, knowledge management and professional collaboration*) is controlled.

Table 2
The CSRD tactics for four steps of validation (Adapted from Yin (2009))

Tests	Case study tactics	Phase of research in which tactics occurs
1) Construct validity	■ Multiple source of evidence - **Participant-Observation**: Identified cultural criteria for successful collaboration to reduce waste. - **Documentation**: Established tacit area and task interdependency during DD-CI; identified collaboration process and technology to reduce industrial waste. - **Archival records**: used minute meeting documents to identify number of rework and miscoordination	Data collection

Table 2 *(continue)*

Tests	Case study tactics	Phase of research in which tactics occurs
2) Internal validity	■ Confirmation of all participants	Data analysis
3) External validity	■ The theoretical proposition was replicated in the second case and the finding affirmed the same result	Research design
4) Reliability	■ Used case study protocol for case	Data collection

Table 3
Operational variables of the constructs

Construct	Definition	Sources of evidence	Result
Work culture	Work etiquette– *4D visualization communication, level of detail, interoperability*– of an organization to support dynamic collaboration and decision making in project in reducing waste	Literature Review (LR) Participant Observation	Identify culture criteria based on practices and value attributes
Knowledge management	Efficient method of tacit knowledge transfer during workflow process to reduce construction wastage	LR Participant Observation	Establish tacit knowledge area
Professional collaboration	Utilization of visual communication techniques between stakeholders in reducing construction wastage	LR Participant Observation	Identify collaboration process

Interview and Participant Observation Protocol

The participant-observation technique is used in the mixed commercial-residential project in Shah Alam, Malaysia (Project M). Data was collected in September to November, 2014 and reported to the gatekeeper who gave the first author access to documents and human resources in the offices. The first author was involved in everyday (Monday to Friday) office activities from 8am until 5.30pm. The major sources of data are the archived minutes of meeting records, interviews, and observation. Fourteen (14) participants were interviewed and the interviews were transcribed before the end of the day with each interview lasting about 1 hour. The first author would then report to the gatekeeper weekly on the findings. Feedback from meetings with the gatekeeper would redirect the first author when needed. Each of the questions was inferred based on categories or theme found during the interviews. From there, the identification of similarities and dissimilarities in the results were discussed. The interviews explored the professionals' collaboration approach, while participant observation technique was used to identify the BIM knowledge management and work culture of the respective teams.

RESULTS

This section reports the results of the interview and observation data. Then, it discusses the interview and observation findings. Ibrahim & Paulson (2008) have identified five sequential phases in the building deployment life cycle: 1) *Feasibility*−this is the phase where the developer ascertain to go/ not to go for the project; 2) *Entitlement*−gaining official permission to build within government jurisdiction; 3) Building permit−acquiring building permit to construct facility on a property; 4) *Construction*−constructing physical works on site; and 5) *Property Management*−premise operation period. The results showed that Project M has multiple and sequential phases occurring in its project's life cycle deployment (see Figure 2). In Project M, the authors noted that dual concurrent and sequential phases transpired during the design development phase and determining target market to secure bank loans for purchasers. To chart the workflows, the authors adapted Ibrahim & Paulson (2008) life cycle workflow diagram. The workflows were divided into the aforementioned life cycle phases and activities were mapped according to case study findings. Figure 2 illustrates the multiple interdependent links between the AEC's workflow and the developer's workflow. Project M showed multiple concurrent and sequential phases in the property development lifecycle and hence, have multiple interdependencies tasks in the workflow. This exhibits two environment factors identified by Ibrahim

& Paulson (2008): 1) multiple concurrent and sequential workflow, and 2) multiple interdependencies tasks.

Data shows that Project M used traditional procurement throughout the building deployment. The study charted the full-time equivalent (FTE) for each team member from each project with an estimation of eight-hour a day in a five work week value. Table 4 highlights the varying number of memberships in different phases. This finding suggests the third environmental factor- the highly discontinuous memberships as opined by Ibrahim & Paulson (2008). The 14 staffs from Project M are similarly high indeed because the property developer relied on external consultants to design and its internal staff to review drawings during the sequential phases of feasibility-entitlement, building permit and construction.

The authors further observed the typical Project M's project definitions pertaining to similar professional phases as indicated in Table 5.

From the observation, 90% of the Project M's team members particularly architects, engineers and contractor utilized 2D-CAD drawings to issue design and construction drawings. New team members have difficulty in retrieving information from bulks of drawings. The new Project M's team members would complete their project cognition by referring personally to a "senior" member to gain information from who was present before. Project M has a lot of "socialization" thru design coordination and technical meeting in
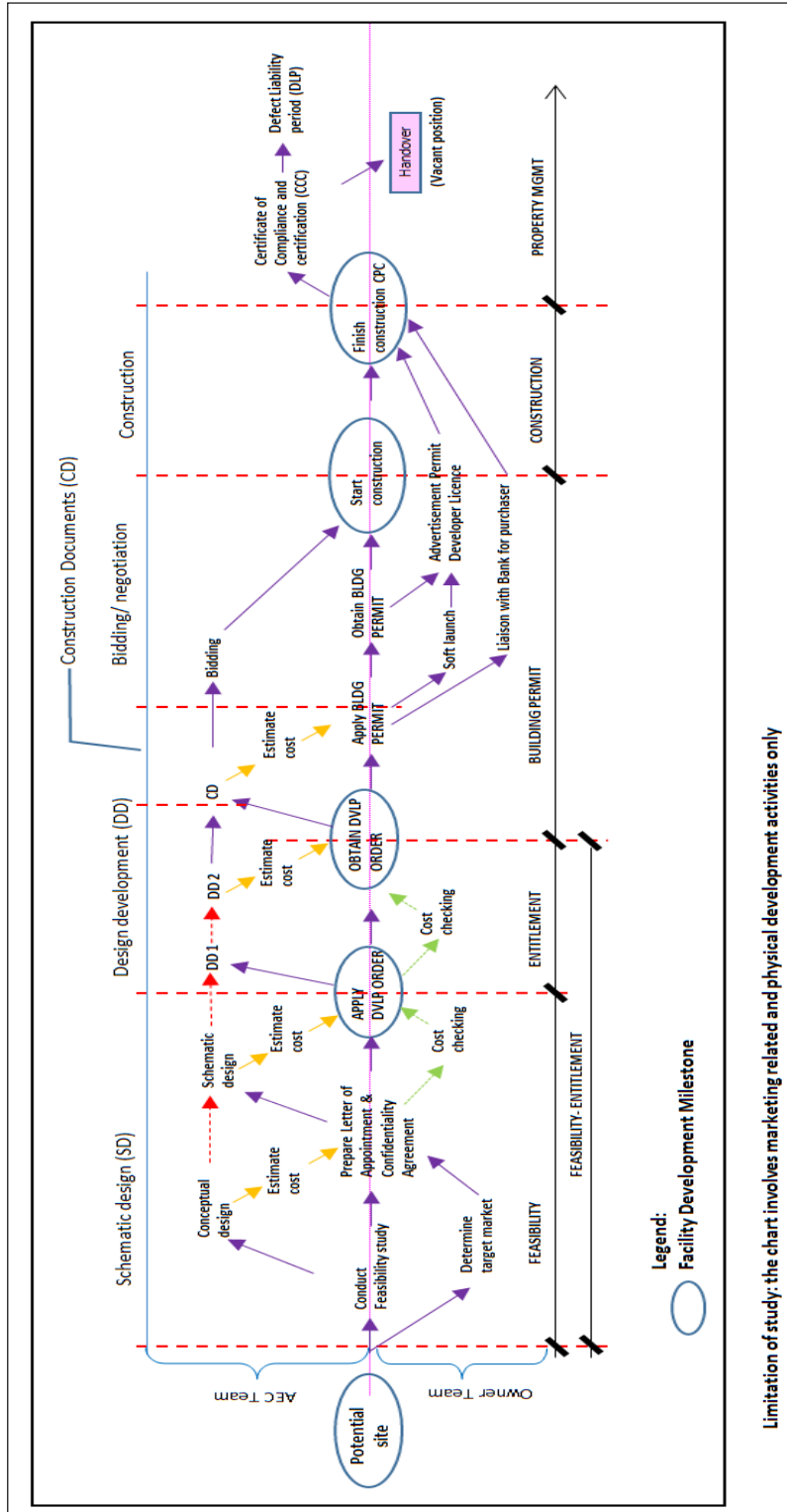
Figure 2. The Project M Development Lifecycle Workflow (Adapted from Ibrahim & Paulson, 2008)

Table 4

Project M's staff position, FTE and allocation for different facility development life cycle phase in a project development (Adapted from Ibrahim & Paulson (2008))

Agent's position/Phase	FE	BP	CO	
Phase Agent	LAM: SS-DD	LAM: DD, CD,CI	LAM: CI	
Developer				
Development Manager	0.25	0.25	0.25	
Dep. Sr. Manager	0.33	0.33	0.33	
Sr. Exec. Development 1		1.0	1.0	
Sr. Exec. Development 2			1.0	
Exec. Development 1	1.0	1.0	1.0	
Exec. Development 2			1.0	
Sr. Exec. Contract			1.0	
Sr. Mngr. Sales & Marketing			1.0	
A-E consultants				Traditional Procurement
Architect		0.33	0.33	
Planner	1.0			
Landscape Architect			0.5	
C&S Engineer	0.33	0.33	0.33	
M&E Engineer		0.2	0.2	
Quantity Surveyor	0.25	0.25	0.25	
Total membership per phase	6	8	13	

Table 5
Equivalent project activities terminologies of Project M

The Project M's Project terminologies	Description
Schematic design	
Design development	Refer to Figure 2
Contract document	
Building design approval	

every alternate week, lasting five hours each session. "Socialization" is a way to interact to transform tacit knowledge to explicit knowledge among individuals in an organization (Nonaka, 1994). Project M's team members used 2D drawings in PDF format to depict anomalies during constructions and transferred them in the File Transfer Protocol (FTP) network for other team members to retrieve latest information about the project. Project M used e-filing system in the intranet to archive documents. These anecdotes showed that tacit knowledge dominates during the earlier phase where a skilled manager obtains this knowledge through socializing, discussion,

and internalizing with team members. At the same time, this skilled manager would ensure explicit knowledge movement is sufficient among other team members using emails and collocated discussion in the succeeding life cycle phase. In summary, the results and analysis of the participatory-observation study provide evidence that Project M exhibits the four

operating environmental characteristics similar to USA projects outlined by Ibrahim and Paulson (2008). Table 7 illustrates the organization dimension in Project M.

The result from using Horii (2005) cultural performance model are mapped in Table 6 to show Project M's normative team culture.

Table 6
Summary of practices dimension in Project M (Adapted from Horii (2005)

Practices Dimension	Project M's team Culture
Centralization	Centralized authority
Formalization	High level of formalization
Organizational hierarchy	Multiple level of hierarchy
Task control style	Control by process
Values	
Decision making	Group-based decision making (consensual)
Communication	Group-based communication

For result validity, the authors used four tests of validity−*construct validation, internal validation, external validation and reliability* (Yin, 2009). For *construct validity*, the authors use multiple sources of evidence from participant observation, documentation and archival records while for *internal validity*, the authors do pattern matching which uses independent variable and dependent variable from the hypothesis to test results and compare them to the baseline model. As for the *external validity*, the authors use replication logic of the case studies to seek generalization; and finally, for the *reliability validity,* the authors used case study protocols for both of the

cases. However, the study did not cover the financial matters of the project due to prior confidentiality agreement.

DISCUSSION

This section discusses how BIM work culture profoundly affects Malaysian professionals' productivity. The discussion starts with the operating characteristics followed by the influence of work culture on project performance.

Operating Characteristics

In an earlier study by Ibrahim and Paulson (2008), they established four operating environmental characteristics existing in

USA project team. The finding indicates that these operating characteristics: 1) multiple concurrent and sequential workflow; 2) multiple interdependencies tasks; 3) discontinuous member; and 4) regressive knowledge flow in a life cycle existed in most organizations around the world, therefore, indicating that there are other factors that influence project productivity. The authors believe that culture could be the salient factor that surpasses the environmental operating characteristics, influencing organization's productivity. This is supported by Horii (2005)'s study that different countries have particular cultural driven normative system which affects majority of the project's performance and information processing. Therefore, the authors propose looking further in the culture factor of a project's organization.

Influences of Work Culture on Project Performance

The authors conclude that culture is the prominent factor influencing an organization's productivity. The study concurs with Horii (2005)'s cultural performance model practice dimensions that the degree of involvement of top manager in its organizational structure, formalizing coordination control and rules in organization; and standardized work processes are among the factors that could support Malaysian AEC work culture to uplift their competencies and expertise.

CONCLUSION

The authors conclude that the four operating characteristics are occurring in similar fashion in Malaysian building projects. The authors also found that using BIM as the knowledge management system and professional collaboration in building project can alleviate a project's information-processing and decision making to another level. Anomalies and clashes can be easily detected and the team could comprehend tasks responsibility ensuring better project productivity. The presence of discontinuous membership in project life cycle could make the "continuous" member create effective and efficient knowledge in various stages and structural phase of the project deployment (Ibrahim & Nissen, 2005). The authors argue that the culture factor is the prominent factor that influences professionals' behavior surpassing the operating environmental characteristics. Since organizational structure is part of the organization's culture, this suggests that an organizational fit would further determine the efficiency and effectiveness of knowledge flow (Hammah & Ibrahim, 2015). The authors are proposing BIM technology to be integrated with cultural knowledge to efficiently accelerate a project's productivity. The authors posit that the culture knowledge of organizations has a profound effect on the project's performance and productivity. The authors define culture knowledge as the factor of work culture, knowledge management, and professional collaborations. In line with Abdul Ghafar et al. (2014) the authors

hypothesize that when time and delivery waste is high, productivity efficiency would reduce when BIM and culture are controlled. The study posit that this *BIM behaviour* would contribute in recommending a cultural knowledge theory for enabling developing countries like Malaysia to have successful partnership with developed countries. Further study is recommended to understand how these cultural dimensions would affect the organizational productivity. Understanding the differences in culturally-driven normative system is becoming important in professional collaboration since it would help reduce misunderstanding and miscommunication due to differences in operational systems while managing global projects.

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REFERENCES

Abdul Ghafar, M., Ibrahim, R., & Shari, Z. (2014). Embedding cultural knowledge in Building Information Modeling (BIM) for fabrication efficicncy to reduce industrialized construction waste. In *15th International Conference on Computing in Civil and Building Engineering (ICCCBE)*. Orlando, Florida: ASCE.

Abdul Ghafar, M., Ibrahim, R., & Shari, Z. (2014). Embedding Cultural Knowledge in Building Information Modeling (BIM) for Fabrication Efficiency to Reduce Industrialized Construction Waste. *The Sixth International Conference on Computing in Civil and Building Engineering* (pp. 1179–1184). Orlando, Florida, United States.

Abdul Ghafar, M., Ibrahim, R., Shari, Z., & Pour Rahimian, F. (2013). Embedding Work Culture in Building Information Modelling (BIM) for Enhancing Collaboration in Global Projects. *International Journal of 3-D Information Modeling (IJ3DIM)*, *2*(2), 16–29.

Arain, F. M., & Low, S. P. (2005). The Nature and Frequency of Occurence of Variation Orders for Educational Building Projects in Singapore., *International Journal of Construction Management*, *5*(2), 79–91.

Begum, R. A., Siwar, C., Pereira, J. J., & Jaafar, A. H. (2009). Attitude and behavioral factors in waste management in the construction industry of Malaysia. *Resources, Conservation and Recycling*, *53*(6), 321–328.

Bouchlaghem, D., Shang, H., Whyte, J., & Ganah, A. (2005). Visualisation in architecture, engineering and construction (AEC). *Automation in Construction*, *14*(3), 287–295.

Burton, R. M., & Obel, B. (2004). *Strategic Organizational Diagnosis and Design,* (3rd ed.). New York, Kluwer.

Buswell, R. A., Soar, R. C., Gibb, A. G. F., & Thorpe, A. (2007). Freeform Construction: Mega-scale Rapid Manufacturing for construction. *Automation in Construction*, *16*(2), 224–231.

Dixit, S., Pandey, A. K., Mandal, S. N., & Bansal, S. (2017). A Study of Enabling Factors Affecting Construction Productivity: Indian Scnerio. *International Journal of Civil Engineering & Technology*, *8*(6), 741–758.

Doloi, H. (2012). Cost overruns and failure in project management: Understanding the roles of key

stakeholders in construction projects. *Journal of Construction Engineering and Management*, *139*(3), 267–279.

Doloi, H., Sawhney, A., Iyer, K. C., & Rentala, S. (2012). Analysing factors affecting delays in Indian construction projects. *International Journal of Project Management*, *30*(4), 479–489.

Fischer, M. (2006). Formalizing Construction Knowledge for Concurrent Performance-Based Design. In *Intelligent Computing in Engineering and Architecture* (pp. 186–205). Springer, Berlin Heidelberg.

Fischer, M., & Kunz, J. (2004). The Scope and Role of Information Technology in Construction. In *Proceeding-Japan Society of Civil Engineers* (pp. 1–32). DOTOKU GAKKAI.

Hammah, N. K., & Ibrahim, R. (2015). Workflow Complexities of Fit Criteria on Strategy Applications and Structure Adaptations. *Journal of Information & Knowledge Management*, *14*(2), 1550017.

Hofstede, G. (1997). *Cultures and Organizations: Software of the mind*. New York: Mc Graw Hill International.

Hofstede, G. (2017). Hofstede Insight. Retrieved April 17, 2017, from http://geert-hofstede.com/Malaysia.Html

Horii, T. (2005). *Impact of Multiple Normative Systems on the Organizational Performance of International Joint Ventures* (Doctoral dissertation, Stanford University). Stanford, California.

Ibrahim, R., & Nissen, M. E. (2007). Discontinuity in organizations: Developing a knowledge-based organizational performance model for discontinuous membership. *International Journal of Knowledge Management (IJKM)*, *3*(1), 10–28.

Ibrahim, R., & Paulson, B. C. (2008). Discontinuity in organizations: Identifying business environment affecting of knowledge flow in PLM. *International Journal of Product Lifecycle Management*, *3*(1), 21–36.

Ibrahim, R., & Pour, F. (2010). Comparison of CAD and manual sketching tools for teaching architectural design. *Automation in Construction*, *19*(8), 978–987.

Jin, Y., Levitt, R., Kunz, J., & Christiansen, T. R. (1995). The Virtual Design Team : A Computer Simulation Framework for Studying Organizational Aspects of Concurrent design. *Simulation*, *64*(3), 42–57.

Kam, C., & Fischer, M. (2004). Capitalizing on early project decision-making opportunities to improve facility design , construction , and life-cycle performance — POP , PM4D , and decision dashboard approaches. *Automation in Construction*, *13*, 53–65.

Kam, C., Fischer, M., Manager, G., Oy, O. G., Karjalainen, A., Manager, C., … Solutions, C. (2003). The product model and fourth dimension project. *ITcon*, *8*, 137–166.

Kazaz, A., Ulubeyli, S., & Tuncbilekli, N. A. (2012). Causes of delays in construction projects in Turkey. *Journal of Civil Engineering and Management*, *18*(3), 426–435.

Kikwasi, G. (2013). Causes and effects of delays and disruptions in construction projects in Tanzania. *Australasian Journal of Construction Economics and Building-Conference Series*, *1*(2), 52–59.

Knight, T., & Sass, L. (2010). Looks count: Computing and constructing visually expressive mass. *Artificial Intelligence in Engineering Design, Analysis and Manufactuting*, *24*, 425–445.

Koskela, L. (2000). *An exploration towards a production theory and its application to construction An exploration towards a production theory and*. VTT Technical Research

Centre of Finland.

Koskela, L. J. (2004). Making do-the eighth category of waste. In *Proceedings of the 12th annual conference of the International Group for Lean Construction* (pp. 1-10). Helsingor, Denmark: University of Huddersfield Repository.

Latiffi, A. A., Mohd, S., Kasim, N., & Fathi, M. S. (2013). Building Information Modeling (BIM) Application in Malaysian Construction Industry. *International Journal of Construction Engineering and Management*, *2*(4A), 1–6.

Lee, A., Marshall Pointing, A., Aouad, G., Tah, J., Cooper, R., & Fu, C. F. (2005). nD modeling- a driver or enabler for construction improvement? In *RICS Research paper Series, University of Salford*, *5*(6), 1-41.

Memon, A. H., Rahman, I. A., & Azis, A. A. A. (2011). Preliminary study on causative factors leading to construction cost overrun. *International Journal of Sustainable Construction Engineering and Technology*, *2*(1), 57–71.

Mhando, Y. B., Mlinga, R. S., & Alinaitwe, H. M. (2017). Perspectives of the causes of variations in public building projects in Tanzania. *International Journal of Construction Engineering and Management*, *6*(1), 1–12.

Mohammad, N., Ani, A. C., Rakmat, R. A. O. K., & Yusof, M. A. (2010). Investigation on the causes of variation orders in the construction of building project–a study in the state of Selangor, Malaysia. *Journal of Building Performance*, *1*(1), 73–82.

Nissen, M., & Levitt, R. (2002). Dynamic models of knowledge-flow dynamics. *CIFE Working Paper #76*.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, *5*(1), 14–37.

Ohno, T. (1988). *Toyota production system: Beyond large scale production (pp. 17–20).* New York: Productivity Press.

Osmani, M., Glass, J., & Price, A. D. F. (2006). Architect and contractor attitudes to waste minimisation. In *Proceedings of the ICE-Waste and Resource Management*, *159*(2), 65–72. London, UK: ICE Publishing.

Poon, C. S., Yu, A. T. W., & Jaillon, L. (2004). Reducing building waste at construction sites in Hong Kong. *Construction Management and Economics*, *22*(5), 461–470.

Rahimian, F. P., & Ibrahim, R. (2011). Impacts of VR 3D sketching on novice designers' spatial cognition in collaborative conceptual architectural design. *Design Studies*, *32*(3), 255–291.

Sacks, R., Koskela, L., Dave, B. A., & Owen, R. (2010). Interaction of Lean and Building Information Modeling in Construction. *Journal of Construction Engineering and Management*, *136*(9), 968–980.

Yin, R. (2009). *Case study research: Design and methods* (Vol. 5). Thousand Oaks: SAGE Inc.

Yong, Y. C., & Nur, E. M. (2012). Analysis of factors critical to construction project success in Malaysia. *Engineering, Construction and Architectural Management*, *19*(5), 543–556.

The Role of the Press in the Democratic Process: The Example of Nigeria's First Republic, 1960-1966

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ABSTRACT

The role of the media in the democratic process was studied in the context of Nigeria's First Republic, 1960-1966, which was a society in transition from colonial dictatorship to a fledgling democracy. The article deploys the historical method of studying its subject matter in time perspective, and thus takes a longer historical view that is often absent from contemporary analyses. It posits that the role of the media in democracy need not be generalized and patterned structurally on Western oriented media theories. Rather the processional approach should be emphasized since it establishes the trends and patterns of press performance, upon which theories should be built. This is particularly the case when taken in the peculiar context and experience of African nations in transition, as illustrated with the Nigerian example.

Keywords: Colonial impact, democratic politics, media and democracy, media history, Nigeria, Nigerian press

INTRODUCTION

This paper examines the role of the media in the democratic process, with the case study of Nigeria, from its attainment of independence from British colonial rule on October 1, 1960 to January 15, 1966, when the Nigerian military seized power. There is a growing body of literature on the theories of media and democracy which are often pious, oblivious of empirical and theoretical analyses from other disciplines and out of touch with the workings of contemporary democracy (Karppinen, 2013). The theories are thus built on conflicting and diverse analytical tools and theoretical frameworks. They therefore tend to draw largely on the constructs derived from a fossilized notion of Western democracies with established mass media traditions. A false picture can only be the result of such an attempt to explain

media roles in African states in transition with theories and analytical tools drawn from the experience of older democracies (Nordenstreng, 1997) Hanitzsch and Vos (2018, p.146) note that the theories which derive from studies conducted "within a Western framework oriented toward the media's contribution to democracy" fail to take into account the peculiar realities of "non-democratic and non-Western contexts." Scholars, like Mwangi (2010) (citing O'Neil) thus emphasize the need for scholars in the new democracies not to continue to adopt Western theoretical frameworks to explain the role of the media in their development efforts. Instead, they ought "to begin to write from their own perspectives, explanations of the role that media are playing" in democratic transition in Africa (p.1).

Against this background, this paper examines the role of the press in the democratic process. It is illustrated with the case study of Nigeria, Africa's most populous country of over 170 million people, during the first quinquennium of its post-colonial history. At independence on October 1, 1960, Nigeria in transition from colonial dictatorship to nascent democracy as a new , sovereign state, was portrayed as having bright prospects as "a stronghold of democracy in Africa," due to its "promising start" (Meredith, 2006, pp. 193-94). Little did it matter that democracy, an ambiguous term, has no fixed form, definition, or meaning, in terms of free, competitive elections and diverse forms of participation in governance. Indeed, democracy is constantly in evolution and reflective of cultural dynamics and historical peculiarities of every given society (Karppinen, 2013). Thus the euphoria about the bright prospects of democracy in Nigeria was misplaced and short-lived, giving way to gloom on January 15, 1966, when Nigeria was brought under military dictatorship. As with the changing perspectives of democracy, so the changing interpretation and theorizing of the role of the media in transition to democracy and democratic consolidation in new nations. In fact, it has been observed that there is much incoherence and incomparability in the different theoretical approaches, even more so in the study of mass media in the established democracies of the West vis-à-vis the new, transition countries. This is more acute with respect to the state of research "which explore how exactly the media fulfill their normatively ascribed role and contribute to democratic institution-building process …" (Jebril, Stetka and Loveless, 2013, pp. 2-4). This paper thus studies the media and democracy in Nigeria's First Republic, taking a longer historical view that is often absent from contemporary analyses. The focus on the First Republic derives from the fact that the nature and character of political contest of that period had subsequently shaped and influenced future political calculations and alignments, as well as the attendant problems and efforts to resolve them in Nigeria (Osaghae, 2011, p. 31).

The literature on Nigeria's failed first democratic experiment explains the travails of democracy (Mordi, 1999), by 1966, in the

context of colonial impact, which is said to have made political instability inevitable (O'Connell, 1967, pp.181-91). British colonialism had given Nigerians a common national identity and government for the first time in their history, but left them to contend with the British promoted paradox, common to former British African colonies, of coexisting with the consciousness of their mutual ethnic differences and separateness. Thus during the first-quarter century of its independence, Nigeria, like the rest of Africa, was written off as a basket-case (Crowder, 1987, pp. 7-24), having failed to manage natural and manmade problems, particularly that of welding into a nation a "variety of different peoples" (Meredith, 2006, pp. 150-161). Nigeria's immediate post-independence leaders, driven by the "doctrine of regional security" (Sklar, 1955, pp. 201-204; Dudley, 1982, pp. 52-57), or absolute control of power in their regional enclaves, manipulated ethnic sentiments. Nigeria thus became a "one –party dominant system with built-in criticism within each region'' (Mackintosh, 1961, pp.63: 194-210). The attendant strains led to the military seizure of power, marked by "scenes of wild rejoicing" (Meredith, 2006, p. 199), at least in southern Nigeria.

Indeed, scholars have tended to adopt the position foreshadowed by the press that politicians should be held solely responsible for the failure of democratic governance during the period (Osaghae, 2011). For instance, the *Daily Times* of January 18, 1966, welcomed the military coup d'état of January 15, 1966 as "a surgical operation

which must be performed or the patient dies." It blamed the putsch on politicians, who had performed "seven days wonders as if the art of government was some circus show". Agbaje (1992) explained that politicians had cast virtually every national institution, including the media "in the role of instruments for the continuation of political warfare". In his view, the political class had sought to influence opinions and perspectives of events through the medium of newspapers, which with the exception of the Daily *Times* (pp. 66, 154), they funded, owned, or established. Omu (1978), without adducing any evidence from the newspapers, however, claimed that the latter regretted their connivance with politicians in the corruption and mismanagement that characterized public affairs.

Some scholars, on the contrary, single out the Nigerian press for adulation, given the apparent variety of its political contents and its relative vibrancy, unlike other African countries, with muzzled press, or mere government sheets (Schwarz, 1968, p. 53). Hachten (1971), in fact, viewed the Nigerian press of the period as "a unique phenomenon in black Africa: diverse, outspoken, competitive and irreverent", even "almost unfettered" (p. 165). On his part, Olukotun (2002) agreed with Diamond who had written in 1988 that the Nigerian press kept alive its tradition of "hard hitting, fearless and independent journalism", which dated to the colonial period (p. 384). This feature of the press is said to have made it a most potent instrument for supporting democratic governance. Thus, the Nigerian

press is clothed in the Western model of media role in democracy. The latter is "exported to the developing world", and erroneously presents journalism as another name for democracy. Hanitzsch and Vos (2018) noted that the Western model of journalism casts the news media in the mold of an institution that was "relatively autonomous from the state". It also viewed journalists as "independent agents engaged in an antagonistic relationship to power while representing the people" (p. 150).

Implicit in the Western-model characterization of the Nigerian press is the normative media theory espoused by McQuail (2010). The theory, which became dominant following Siebert et al's publication of the *Four Theories of the Press, with emphasis on the Authoritarian, Libertarian, Social Responsibility and Soviet Communist concepts of what the media of mass communication should be and do,* has since undergone several revisions. With the institutionalization of both the media and democracy, the new focus of Habermas on the public sphere has emphasized the role of the media as a watch-dog (Nordenstreng, 1997). The theory encapsulates general expectations in a democracy that the press support the democratic process. In this regard, the press is expected to disseminate a plurality of information and viewpoints, give space to divergent voices and provide avenues for debates .The theory abhors government ownership of, or interference with the media, which at the same time exercises

the freedom to choose the manner and in whose interest it plays its role, insofar as it does not harm the polity, or public interest. In effect, this theoretical construct rests on the central role, indeed political power of the press in the conduct of liberal, democratic politics. In this context, the press functions as the Fourth Estate, as it facilitates "the flow of information about public events to all citizens and the exposure of politicians and governments to the public gaze and critique". It thereby engages in guardianship role as a check on the abuse of power, while acting as an agent of mobilization. The theory is, however, limited by the difficulty of defining what constitutes public interest, given that the media is often driven by the profit motive or commercial considerations. Thus it loses the capacity to function as "a vehicle for advancing freedom and democracy and, instead, becomes "…more and more a means of making money and propaganda for the new and powerful …'press barons'" (McQuail, 2010, pp. 151, 162-172). This situation gives rise to the tendency for a few voices to dominate the channels through which the press performs such roles (Seymour-Ure, 1974, p. 53).

Hanitzsch and Vos (2018) aptly cautioned against the uncritical application of the Western-derived generalized media theory to the study and explanation of media roles in democracies in "non-Western contexts", where the stark realities of "overwhelming evidence for alternative roles exercised by journalists" abound (pp.146-149). Nonetheless, the normative

theory remains appropriate for this paper, insofar as the objective is to focus on its shortcomings in the context of a non-Western society. Of importance is the press's capabilities that are highly compatible with the functions of political parties, because, like politics, its concern is with verbal activities. It therefore serves as an effective medium through which political parties and politicians appeal and explain their programs to the electorate.

Against the foregoing background, this paper critically examines the contributions of the press to democratic practice in Nigeria's First Republic, 1960 – 1966, which had hitherto been neglected. Till date, there is no scholarly, historical investigation of the role of the press in the abrupt end of Nigeria's first democratic experiment. This paper, therefore, aims to investigate how much plurality, diversity and editorial independence existed in the Nigerian press, as pundits have postulated. It further seeks to establish to what extent, if any, the press succeeded in monitoring the public space, exposing constraints to free exercise of democratic opposition, providing good material for debate, and enabling Nigerians to assess the government and form individual opinions on the issues examined in this paper. Such a study is useful to test the validity of Western media theories related to democracy (Wasserman, 2011, pp. 2-3), in the African context and experience (Nyamnjoh, 2011). It is hoped that this study will make a modest contribution in this regard, and thereby mediate the influence of theory in explaining historical phenomena, especially in the context of new nations. It concludes that in assessing the media in democratic governance, theories need not be generalized to overshadow the processional, or historical approach which clearly establishes the trends and patterns of press performance, upon which theories should be built.

MATERIALS AND METHODS

The materials consulted for this paper consisted mainly of primary sources, conveying contemporary, eyewitness accounts and information, namely newspapers (Barton, 2005; Lucas, 1981; Jones, nd) which were supplemented with secondary sources. At least, by 1964, Nigeria hosted 23 dailies, 20 of which accounted for a daily circulation of 289,000 (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1964, p. 102). Grant (1971) classified them into four types, namely overseas commercial, represented by the *Daily Times*; political party, made up of the *West African Pilot* and the *Nigerian Tribune*; government, consisting of the *Nigerian Morning Post,* (Northern) *Nigerian Citizen*, (Eastern) *Nigerian Outlook*, and (Western Nigerian) *Daily Sketch*, and overseas commercial/ political party, which was typified by the *Daily Express*. The overseas commercial newspaper type had a distinct feature of foreign ownership (*Daily Times*, was purchased from a subsidiary of the International Publishing Company by the London *Daily Mirror* Group in 1947). The pro-establishment newspaper, with a vast outlay of financial resources

and modern equipment, emphasized profit and sound business management, and was, therefore, national in coverage, circulation and readership. The political party newspaper type, typified by the *West African Pilot*, published by Azikiwe in 1937, viewed and reported all the events of the period from the viewpoints of the NCNC. It had a partisan editorial policy on political matters, but it was outspoken and enjoyed a relatively national readership due largely to its past anti-colonial record. Similarly, the government newspaper typified at the national level by the *Nigerian Morning Post*, was loyal to its paymaster, and had a pro-government and partisan editorial policy. The last newspaper type, overseas commercial/political party represented by the *Daily Express* was a hybrid. The *Daily Express* was controlled by Roy Thomson of Canada and Britain, and the National Investment and Properties Corporation for the Action Group, with mutually conflicting interests. The one aimed at modern, rational business management and profit maximization, while the other emphasized political loyalty and partisanship in staff and editorial policies. Most of the newspapers had a limited, regional readership, and undisguised partisan editorial policies as reflected in three newspaper distribution centers of Lagos and Midwest; Midwest and the East, and the North (pp. 95 – 100), by 1964. Consequently, by 1966, only four newspapers, namely the *Daily Times*, *the West African Pilot, the Morning Post*, and *the Daily Express* were somewhat national in circulation and readership, and were

consulted for this study (Table I). Their choice for the study was guided by their reportage, including editorials, headlines, and opinionated pieces on the issues that impacted on democratic governance during the period, as well as their circulation coverage and readership. These were consulted at the National Archives, Ibadan, and the University of Ibadan Library, and complemented with evidence obtained from the works of leading journalists of the period, to produce this paper.

The materials provided by the newspapers were interrogated through the application of the critical-analytic methods of contemporary history. Central to the methods is the critical analysis of sundry data, guided by the interdisciplinary approach which enables the historian to sharpen his interpretation of data and explanation of phenomena. In this context, insights are drawn from the theoretical constructs of the social sciences, mindful of the failure of the latter to appreciate that the study of man in society entails a historical study as the laboratory to "test and consolidate its knowledge about the social world". This is significant, given the variegated, and in some cases doubtful contemporary, internet sources, instead of the traditional archival sources usually consulted by the historian. Thus sources are consulted, not used, and scrutinized for credibility, validity, integrity and relevance to the subject of enquiry. They form the building blocks for facilitating the construction of phenomenon "in process through time" or "within the framework of historical analysis". Emphasis is thus

on writing a history that is less descriptive, while recognizing the importance of trends and patterns of the events that form the focus of the research (Ake, 1991, pp. 19-20; Abasiattai, 1999, pp. 5-16.).

Table 1
Nigerian newspaper types

Newspaper Types	Owner/ Publisher	Editorial Policy	
Government			
I. (Northern) *Nigerian Citizen*	Gaskiya Corporation	Partisan: Pro-NPC/ Northern Regional Government	Regional
II. *Nigerian Morning Post*	Federal Government of Nigeria	Partisan: Pro-NPC/ Federal Government	National
III. (Eastern) *Nigerian Outlook*	Government of Eastern Region	Partisan: Pro-NCNC/ Eastern Regional Government	Regional
IV. (Western Nigerian) *Daily Sketch*	Government of Western Region	Partisan: Pro-NNDP /Western Regional Government	Regional
Overseas Commercial/Political Party			
I. *Daily Express*	Thomson International/ National Investments and Properties Corporation for the Action Group	Pro-Action Group/ Western Regional Goverment to 1962; Pro-NNDP /Western Regional Government , 1963-1965	National
Political Party			
I. *West African Pilot (Lagos)*	Zik Group of Newspapers	Pro-NCNC	National
II. *Nigerian Tribune (Ibadan)*	Allied Newspapers for the Action Group		Regional
III. COR Advocate (Uyo)			
IV. The Northern Star (Kano)			
V. The Eastern Observer (Onitsha)			
VI. The Middle Belt Herald (Jos)			
VII. The Borno People (Jos)			
VIII. Daily Mail (Kano)	Northern People's Congress/ Northern Regional Govt.	Pro-NPC/Northern Regional Government	Regional
Overseas Commercial			
I. *Daily Times*	London Daily Mirror	Pro-Profit/establishment	National

Source: Adapted from Grant, (1971)

RESULTS AND DISCUSSION

Indeed, it is widely accepted that, generally, the press does not operate in a vacuum, but mirrors both the economic and political structures of a nation. These, in turn, determine both media content and audience (Wells, 1974). In the same vein, scholars agree that "It is the content of newspapers that determines their political roles", even as the style and content of such newspapers "are a product and compromise of frequently competing forces"(Potter, 1975, p.11). Among these could be mentioned the political system and social contexts within which the press functions and an integral part of which it is. In multi-ethnic societies, like Nigeria, these determine the nature and extent of the political role of the press. Hopkins (1970) thus posited that "Cultural differences might weaken mass media effectiveness by reducing their audience" (pp. 26-27).

Nigeria, Africa's most populous country of over 170 million people, is very vast, with an area of 923,768 square kilometers. It is dominated by three ethno- linguistic majorities of Igbo, Yoruba and Hausa-Fulani, who occupy the South and the Nigerian Sudan, respectively. However, it is a multi-ethnic, multi-lingual and multi-religious country of over 250 ethnic groups, who speak at least five hundred languages (Elugbe, 1990; Ayeomoni, 2012). A remarkable feature of these ethno- linguistic groups is that most of them individually constitute an ethnic nation in their own right, with distinct customs, traditions and usages, borne of centuries of practice and experience, a common language, dialects, and occupying a distinct and contiguous territory. Thus, the " geographical cohesiveness and exclusiveness of Nigeria's ethnic groups" is such that not only do they occupy their respective ancestral ethnic homelands, but also they are not geographically intermixed (Schwarz, 1965, p. 3).

The evidence suggests that the press in Nigeria's First Republic, including the *Daily Times* did not operate or function in isolation from the ethno-political contexts which subjected it to diverse constraints. Its performance during the period was thus a far cry from the theories propounded by media experts. In fact, the question has appropriately been asked, whether the media are better classified as agents of democratic change or as an institution that leads or follows change for democracy. What seems to be clear is that the much touted role of the media as an instrument for "enforcing political accountability through watchdog journalism" is exaggerated (Jebril, Stetka, & Loveless, 2013, p.3). In fulfilling its role the press was constrained by the political milieu of which it was a part and within which it functioned. It is therefore germane to understand the ethno-regional political context and nature of press and democratic politics during the period covered by this study.

The Ethno-Regional Political Context

A major constraining influence upon media performance was the colonial and ethnic backgrounds of the media and its practitioners as well as the political class

of Nigeria's First Republic. For instance, a coalition government of the National Convention of Nigerian Citizens (NCNC), and the Northern Peoples' Congress (NPC) that ushered Nigeria to independence in 1960 were rooted in Nigeria's colonial past, and ethno regional in character. The NCNC, formed in 1944, was Nigeria's foremost heterogeneous, nationalist party, (Sklar, 1983 , pp.129-149). It was a 'mass party', characterized by a pragmatic ideological inclination. It ruled the Eastern region and enjoyed some considerable following across Nigeria, including Western Nigeria where it was the opposition party. This was due to its chameleonic character which enabled it to expand its electoral base of support by becoming "different things to different groups" (Dudley, 1982, p.46). On the other hand, the conservative, ethno-regional Northern Peoples' Congress (NPC) had metamorphosed into a political party from the socio-cultural association *Jam'iyaar Mutanen Arewa* which preceded it in 1948 (Sklar, 1983 , pp. 91-96). True to its motto "One North, One people, irrespective of Religion, Rank or Tribe", it had restricted its membership to people of northern Nigerian descent. The Action Group (AG), the opposition party in Nigeria's First Republic, an offshoot of the pan-Yoruba *Egbe Omo Oduduwa*, was unveiled in 1951, as a "Western Regional Political Organization". It was committed to stemming Azikiwe's rising influence in Lagos and the Western region, wielded through the NCNC, by seizing power through the election foreshadowed by the

Macpherson Constitution in 1951 (Sklar, 1983, pp. 101-106). The latter goal was achieved by buying "its way into forming the government of the Western region in 1951…" In the aftermath of its defeat in the 1959 federal elections which ushered Nigeria to independence, the party sought to transform itself into a national, mass-based party with a new ideology of "democratic socialism" (Dudley, 1982, pp. 42, 47-48).

This decision triggered an intra-AG crisis in 1962, which fuelled the events that culminated in the abrupt end of Nigeria's first democratic experiment. No single party won a majority in the 1959 elections. However, James Robertson, outgoing colonial governor-general pre-empted Nigeria's first independence government by appointing Tafawa Balewa, NPC's deputy leader, as prime minister before the full results were declared. The AG's separate offers to the NPC and NCNC to form the coalition government having failed, the NPC/NCNC coalition constituted the federal government of Nigeria's First Republic, 1960-66, while the AG became the opposition party. However, the NPC at the end of 1960 already had a working majority in the federal parliament. Thus NCNC membership of the coalition government was superfluous (Dudley, 1982, pp. 61-62). The NCNC therefore sought to expand its power base in Western Nigeria. In 1964, it formed the United Progressive Grand Alliance (UPGA) with a weakened AG to contest the 1964 federal and 1965 west regional elections. On the other hand, the NPC went into an alliance with the Nigerian

National Democratic Party (NNDP) of Samuel Ladoke Akintola, West regional premier under the banner of the Nigerian National Alliance (NNA), for the same purpose.

These ethno-regional parties mobilized the newspapers they published or funded and controlled, to strengthen their advantages in the critical issues of the period, namely the 1962 AG crisis, and the concomitant 1965 Western Region parliamentary elections. The latter was massively rigged, to stop power from passing on to the UPGA which had characterized it as "operation do or die" (Schwarz, 1968, p.176). How the press performed its role in Nigeria's first democratic process, based on its reportage, comments and presentation of these issues are examined in the remaining sections of this paper.

The results reflect the discussion which is built on the historian's characteristic evocative prose, to unravel the nature and dynamics of media role in Nigeria's democratic process. This study being historical, the data which forms the basis of the ensuing discussion is presented in line with the canons of the discipline. It is designed "to enhance the field of history" rather than "turn history into a new species of academic inquiry" (Abasiattai, 1999, p.6).

Assessing the Role of the Press in Nigeria's Democracy, 1960-1966

The Action Group Crisis. Premier Akintola had opposed his party leader's move to implement mass-oriented programs that would widen AG's electoral support base across Nigeria. Middle class, 'old guard' faction of the party (Africa Report, 1963, p.33), and the traditional elite supported Akintola's rejection of the role of opposition for fear it could shut out Western Nigeria from the system of rewards. He therefore sought to strengthen his position by replacing Awolowo's loyalists in government boards with his own (Osaghae, 2011, p. 39).

A stalemated attempt by the party to replace the premier through a vote of no confidence in the regional parliament culminated in fighting among the legislators which caused the police to lock up the regional House of Assembly in Ibadan. The federal government probably orchestrated the crisis in a bid to destroy the opposition party. This was done through the declaration of a state of emergency in the Western region, and consequent dissolution of all democratic structures, including the federal government take-over of the government of Western Nigeria, in May 1962. Obafemi Awolowo and his lieutenants were subsequently jailed for treasonable felony. At the end of the emergency, Akintola was reinstated as premier without going through election on the platform of his new United Peoples' Party (UPP) which in league with the NCNC controlled the regional government. He later went into an alliance with the NPC under the banner of his new Nigerian National Democratic Party (NNDP) during the 1964 federal parliamentary elections .The declaration of a state of emergency was thus a political maneuver, designed to stamp out

opposition. It culminated in the failure of democratic governance during the period (Akintunde, 1967; Mackintosh, 1966).

This internal leadership crisis which engulfed the ruling Action Group in Western Nigeria, in 1962 provided the first test of the press' fulfillment of its role in the normative tradition as the Fourth Estate in Nigeria's democratic process. But, the press played no distinct agenda-setting and gate-keeping roles, based on investigative journalism which would have provided a medium to elevate rational discussion in the public sphere, and thereby galvanize the people for effective participation in the democratic process. Instead, it acted as megaphones and instruments of the feuding politicians who had sought to deploy every imaginable undemocratic device to cling to power during the period. Thus, in the performance of its role during the Action Group crisis, the press was circumscribed by the narrow prisms of party political considerations, or business calculations. It thereby failed to check, as the normative tradition stipulates, the constraints on the opposition's fulfillment of its mandate, and to expose the government to the public gaze on the issues.

For instance, the *Daily Times*, despite its massive news gathering resources (UNESCO, 1964, p. 103), limited its reports to party and government press releases, or hands-out, in obvious deference to its organizational and economic interests, rather than the furtherance of the people's quest for information (Harcup & O'Neil, 2017). It thus refrained from editorial comments during critical moments of the crisis. At the onset of the crisis the newspaper gave front-page prominence on May 10, 1962 to Awolowo's tour of the home constituency of Akintola, the premier who was reconstituting the board of the regional Western Nigeria Development Corporation (WNDC) with his own supporters. The newspaper's attribution of the crisis to this action by the regional premier attracted an instant rebuttal from the government via a letter to the *Daily Times*. On May 11, the paper gave prominence to the regional government's letter that "Only Akintola has Power" to hire and fire members of statutory corporations. In fact, up to the declaration of a state of emergency in the region, the newspaper ran only one editorial on it. The front page comment of May 26, 1962, was personally signed by Babatunde Jose (1987), its editor. It condemned the fighting and recourse to violence by parliamentarians in the Western House of Assembly, and urged the federal government to deploy enough policemen to the region so as to forestall the breakdown of law and order. Jose explains that "as the Editor of the *Daily Times*", he "backed the Akintola group …when the Action Group crisis started in May 1962", and personally signed the editorial, to ensure that he and not the company bore responsibility for it (pp.108, 146).

The editorial was reinforced in a banner headline of May 26, 1962, "Obas Beg Balewa", not to declare a state of emergency. The report focused on the premier's refusal to vacate his office after his dismissal by the governor, and the

deployment of the police to secure public safety and maintain public order in the region. Indeed, the newspaper took the position that the internal party crisis did not warrant Akintola's removal from office. The attempt by Western region's traditional rulers to prevail on Nigeria's prime minister not to declare a state of emergency thus received the paper's front page attention. When, therefore, Prime Minister Balewa declared a state of emergency on May 29, 1962, the paper's headline, "Emergency declared/ Balewa takes over Western Government" amounted to an expression of surprise and disappointment. Yet, it was not until November 30, 1962 that the newspaper editorialized on "Democracy in Western Nigeria", to recommend the widening of the political space through democratic elections at the expiration of the emergency period, in tune with the pledge of the federal government to guarantee liberal democracy in Nigeria. The paper's editorial of December 1, 1962, "The Electoral Law", advocated a new legislation against cross-carpeting by legislators. The editorial thus targeted Action Group legislators who had switched their earlier support of the premier's removal for the federal parliament's passage of the emergency regulations.

However, the *Daily Times* maintained an undignified silence when Akintola, contrary to the newspaper's editorial of November 30, 1962, was reinstated in January 1963, without revalidating his tenure in fresh elections, even as Awolowo and his close associates languished in prison. Jose (1987)

attributed the *Daily Times' silence to the fact that its journalists* were so divided and in cohort with the feuding politicians that the newspaper could not creditably perform its role as an information, education and debating medium in furtherance of Nigeria's toddling democracy during the crisis. The editor had "supported Akintola's fundamental stand that the interest of the Yoruba was best served by participating in the Federal Government." This may have influenced his "editorial policy direction of the *Daily Times*" (p. 146), towards abstaining from editorials and reports on the reinstatement of Akintola without recourse to the democratic process of election in 1963. The Daily *Times* thus failed to exercise editorial independence, but supported or condoned the stifling of opposition. The foreign-owned newspaper may have played safe in its business interest, but it thereby failed to watchdog and gate-keep the realm to facilitate the deepening of democratic culture and sustenance of opposition politics in Nigeria.

Nor did the *West African Pilot* fare better; it played a deeply partisan role which in no way furthered the deepening of democratic politics in which the opposition was cast in the role of a credible alternative to the government in power. In doing this, it deployed screaming headlines in furtherance of sensationalism, thereby befuddling the issues in the crisis, as it was blown in all directions by the political gymnastics of the NCNC. In fact, it had presented the Action Group crisis as a war of supremacy between Awolowo and his main challenger,

Akintola in which the latter was bound to suffer a hopeless defeat. On May 11, 1962, its headline, "Awo to Fight to Bitterest End/ AG 'War' No 2" was authoritative that Awolowo was resolute about enforcing party supremacy on the government and its functionaries who were elected on Action Group platform. The report accurately predicted the breakup of the party, with the support of the NPC by Akintola and his supporters, who it categorically reported on May 12, 1962, would be expelled from the AG. The paper's report at the early stage of the crisis thus reflected NCNC's loathe of party indiscipline which it had epitomized for much of its existence since the 1940s. Therefore, Akintola's dismissal as AG deputy leader and premier, actions which he successfully resisted, attracted the *Pilot'*s front page report on May 21, 1962. The report was to the effect that Akintola had been worsted in his political duel with his party leader.

However, when the NCNC abandoned its support for party supremacy and sought to capitalize on the crisis to form the regional government (Mackintosh, 1966, p. 448),the *Pilot* gave prominence to this new reality in its headline on May 22, 1962: "Crisis: Zik flying in/ NCNC wades into crisis/ west is no exclusive property of Action Group". This report emphasized NCNC's demand for the dissolution of the Western House of Assembly, based on its assumption that it would form the subsequent government of the region. This report was complemented with an editorial, echoing NCNC's position that "Western Nigeria does not belong to the Action Group alone", and given that the regional government was no longer stable, "we must all go to the polls and purify ourselves before the voters". Thus, on May 26, 1962 the *Pilot*'s report of the May 25, 1962 fighting in the Western Nigeria legislature emphasized the NCNC's desire, according to the Eastern regional Premier, Michael Okpara, to "Take over West".

Thus the *Pilot* supported the emergency regulations in its editorial of May 31, 1962 when the federal government took over the regional government, ostensibly to ensure "peace, order and good government", given "the absence of a duly constituted Government in Western Nigeria" (The Federal Ministry of Information, 1963, p. 2167). But it did a volte-face in another editorial of September 10, 1962. In the latter, it noted that the prime minister declared the state of emergency due to violent disagreements among politicians and not as a result of any break down of law and order in Western Nigeria. Indeed, the political party newspaper type, the *Pilot,* even if not officially owned by the NCNC, sacrificed professional standards and ethics for blind support of partisan political goals. Thus, contrary to the dictates of the normative theory, it failed to properly inform, enlighten and educate its readers on the crisis of far reaching significance that cast a dark shadow on the prospects of democracy in Nigeria. The *Pilot*, in fact, bears out King's (1967) assertion that partisan newspapers, even in Britain up to 1965, were sycophantic (p. 91); they also did the work of parties for them, including

challenging the arguments of the opposition (Seymour-Ure, 1974, p. 230).

The government-owned *Nigerian Morning Post* lacked the autonomy to carve a niche for itself by challenging the pervasive undemocratic norms characteristic of the politics of the period. Thus it played a sycophantic role in defense of Nigeria's prime minister and the dominant, NPC faction of the coalition federal government of Nigeria It thus made no contributions to the advancement of democracy. In fact, it presented narrow and bland perspectives of the issues in a way that tended to ridicule the opposition, and thereby failed to empower and facilitate an all-inclusive participation in the democratic governance of the period, through dialogue. In fact, like the political party newspaper type, the government-owned *Nigerian Morning Post* made effective use of its attachment to politicians. It viewed the Action Group crisis from the perspective of the federal coalition government in a way that, contrary to government's publicized claims, it failed "to produce adequate coverage of differing views" (The Federal Ministry of Information, 1963, p. 1469). The *Nigerian Morning Post* front-page report of May 11, 1962 presented the crisis as 'a dispute' exacerbated by Awolowo's dictatorial tendencies over the control of the party and the Western Nigeria Government. It relied on Akintola and his supporters for its authoritative reports and pronouncements on the crisis. It, therefore, provided its readers with the insider information that the two feuding groups were irreconcilable and that

the crisis would run its course. It disclosed in its report of May 12, 1962, that Akintola was ready to go the whole hug, with NPC's support to triumph over Awolowo, in the event of any attempt either to dissolve the regional legislature or expel him from the party. This report provided an insight into the dynamics that ignited and sustained the crisis, namely an inchoate rapprochement between the Akintola-led faction of the AG and the NPC faction of the federal coalition government, which would materialize in the Nigerian National Alliance (NNA) in 1964. Obviously utilizing its connections to the two parties in the coalition government, the paper, like the *Pilot*, insightfully brought to the benefit of its readers NCNC's schemes, being the opposition party, to exploit the intra party crisis to position itself to form the new government of the region. However, the paper betrayed its partisanship on June 1, 1962, when its back page report of the arrival of a sole administrator in Ibadan to commence the six-month period of emergency, , was captioned "Day of joy".

The anti-Awolowo stance of the *Morning Post* was palpably advertised in a column "Giants in Chains", introduced on May 23, 1962 and written by its editor, Abiodun Aloba. In what foreshadowed the imprisonment of the Action Group Giants of Awolowo and his lieutenantsthe columnist ridiculed Awolowo and his new ideology of democratic socialism. This was complemented with uncomplimentary editorials which not only justified the declaration of a state of emergency, but regretted, on May 26, 1962, that the

dissolution of the democratic institutions of Western Nigeria was delayed by constitutional niceties. Thus, its editorial of May 29, 1962 enjoined parliamentarians attending the emergency session of Nigeria's House of Representatives to admit "The Solemn Truth" that law and order had broken down in the region, and authorize a state of emergency and drastic measures which might be viewed as making sacrificial lambs of the people of Western Nigeria. On June 2, 1962, the newspaper capped its partisanship with an editorial, "Let's count our blessings" in which it celebrated "The misfortunes of the Action Group," due to the imposition of a state of emergency on Western Nigeria.

The newspaper's poor performance was a sad reflection on the journalism profession in Nigeria, given that at inception the *Morning Post* paraded among its board of directors some of the finest journalists in Nigeria. Notable among these were its chairman, board of directors H. O. Davies , who was former general secretary of the defunct pioneer, nationalist Nigerian Youth Movement (NYM) , as well as foundation business manager and columnist of the *Daily Service* , NYM's organ; M. C. K. Ajuluchukwu, editor- in- chief of the weekly *Sunday Post*, who had earlier edited the *West African Pilot* during the period 1951-54 ; Increase Coker, former editor, *West African Pilot* who had also served as publicity officer in the colonial public relations office by 1950, and Abiodun Aloba, ex-Zikist (Mordi, 2011, p. 205), foundation editor -in -chief, *Morning Post*. The

federal government had published the *Post* newspaper to publicize Nigeria to the world and counter severe criticisms of its policies by the local press which the government claimed had deployed " every journalistic artifice to make a laughing stock" of it in the eyes of Nigerians (Coker, 1968, p. 62). No doubt, the newspaper reflected and purveyed the intentions of the federal government of Nigeria to clamp down on the opposition so early in Nigeria's democratic experience, but with a zealousness that was outside the bounds of journalistic practice.

On its part, the pro-AG *Daily Express* played an undistinguished partisan role that was not geared towards strengthening consensus and participatory democracy in the tension-packed, divisive and highly volatile politics of Western Nigeria. Instead, it sought to garner support and sympathy for Awolowo, and slanted its reports and editorials in those directions. Its report on May 15, 1962 of the dismissal of Awolowo's loyalists from the board of the WNDC was thus presented as an affront on party supremacy, which the paper pilloried in its editorial as constituting an act against Yoruba solidarity. Its headlines of May 12-18, 1962 thus gave prominence to support for party supremacy by sundry groups. Its editorial of May 17, 1962 therefore summed the issues in the crisis as a "Matter of discipline" and recommended disciplinary actions against the Western region premier. Olabisi Onabanjo, Awolowo-loyalist member of the regional legislature who was a seasoned journalist writing as *Aiyekoto* (the parrot), complemented the editorial

with a chastisement of the premier. In subsequent editorials of May 19-21, 1962, the *Daily Express* consolidated its judgment that Akintola was guilty of indiscipline for challenging party supremacy, and, so, deserved the severest disciplinary action. In the same vein, on May 23, 1962, the paper gave prominence to the Eastern region Premier Okpara's condemnation of Akintola for defying his purported sack by the governor of the Western region. Conversely, support of Akintola by the Northern region Premier Ahmadu Bello was deprecated by the newspaper, on May 21, 1962, as "Sardauna's evidence", which it asserted was motivated by narrow considerations of political gains, instead of the unity and stability of Nigeria. Accordingly, its report of May 26, 1962 gave prominence to the "fighting in West House of Assembly". It focused on the role of the opposition NCNC members in frustrating the sitting of the regional parliament, and the Eastern region premier's call for the takeover of the Government of Western Nigeria. It editorialized that the "Dangerous precedent" presaged "the beginning of the end of parliamentary democracy in the country". "A Hush Hush Parliament/ federal Government emergency shock order" headline of May 29, 1962 which it characterized the emergency session of the federal parliament to approve emergency regulations on Western Nigeria was thus meant to complement its position in its editorial for the day that it was a wrong step. The right step to take, it admonished, was for any party seeking power to actualize its ambition through the ballot .Balewa

had hinted about the declaration of a state of emergency in Western Nigeria in his broadcast to the nation, which the *Daily Express* in its headline of May 28, 1962 had characterized, using AG's phrase, as "The great conspiracy." But a prominent AG lawyer in answer to a question "Can Balewa sack Western cabinet?" had written in the *Daily Express* of May 28, 1962 that no emergency situation existed to warrant such measure ,except the NCNC which was scheming to assume temporary power. This latter position was complemented by the newspaper's editorial, "Democracy on Trial" to canvass the fair argument that law and order did not break down in Western Nigeria. Rather the Western House incident was premeditated by Akintola and his supporters, with the active connivance of the NCNC and the prime minister, to impose Akintola, and brought chaos upon Western Nigeria. Its editorial of May 31, 1962 thus surmised that the imposition of a state of emergency on Western Nigeria was premeditated, unwarranted and a great misuse of power .

The *Daily Express's* partisan role in the AG crisis derived from its close attachment to the person of Awolowo and the Action Group, whose members controlled the newspaper's editorial policy. For instance, Amalgamated Press which in August 1960 partnered with Roy Thomson to publish the *Express* had as its Editorial Director, Victor Olabisi Onabanjo, a professional journalist who had trained on government scholarship at the Regent Street Polytechnic, London, 1950-51. He had returned to Nigeria in

1952 to work briefly with the Gaskiya Corporation, publishers of the colonial government- owned weekly *Citizen* (Mordi, 2011, p. 205). As from 1954, he had worked for the Action Group mouthpiece, *Daily Service* where his *Aiyekoto* column brought him to limelight. Grant (1971) noted that the relationship of journalists working for pro- AG newspapers to the party, citing the examples of Onabanjo and Lateef Jakande, was " one of extreme loyalty to the party"(p. 126).They were, like Onabanjo who during the period was an Action Group member of the Western House of Assembly, active in politics, even though committed to journalism. The partisan involvement of the newspaper, however, colored its perspectives and reportage of the crisis and partly exposed its leading lights to political persecution in the post- emergency years.

The West Regional Elections. The only direct beneficiary of the Action Group crisis was Akintola who was reinstated to his position as premier, six months after the declaration of a state of emergency over Western Nigeria. The opportunity for Premier Akintola to validate his claim to the leadership of the Western region through the democratic process was, however, provided in 1965. The opposition had expected too that the West regional parliamentary election of October 11, 1965 offered them an opportunity to wrest power from him. It is noteworthy that the press still functioned as instruments of the political class rather than the Fourth Estate. The press thus failed to play any role in furtherance of the interests

of the governed, as mediators of Nigeria's fragile democratic process

For instance, the *Daily Times* failed to broaden and diversify its editorial policy, which in its economic interest, would have widened its audience, and readership base. Rather it maintained its policy of editorial abstinence, in spite of the regional government's ban on all public processions and meetings, except those of a religious nature, during the period of campaigns for the election. It was left for Peter Enahoro, the newspaper's editor-in-chief to criticize in his customized Peter Pan column the ban on procession and acts of gerrymandering. Of note was his November 3, 1965 lamentation that "recent maddening events in Western Nigeria" constituted a "tragedy that has befallen Africa's lone glimmer of hope for democracy". He had warned that "if you destroy the ballot box you leave the field clear to the people to seek other means of restitution" .This was his reaction both to the violence that had greeted the electoral outcome and NNDP's anti-Igbo pamphleteering which he believed was aimed to reduce Nigeria to "warring confederate states".

The masses of the region, including AG supporters who were convinced that Akintola had rigged himself back to office, had embarked on an orgy of violence against the premier's supporters. The newspaper's editorial of October 25, 1965 urging all to tread the "Path of Peace", was of no effect. Thus the *Daily Times'* editorials of December 4, and 16, 1965, expressed alarm at the "violence, arson and murder" which

had erupted in Western Nigeria on a "scale never before known in Nigeria". It had recommended an "All Party Government" as a stopgap measure till new elections were held "in obvious fairness", preceded by the prime minister's intervention to end lawlessness and violence in the region. This was a circuitous way of recommending the imposition of a state of emergency in the region. It is instructive, however, that the newspaper tucked in its inside pages news of widespread arson, violence, killings, including dousing of victims with petrol and setting them ablaze(operation *wet –ie*) as well as demolition of houses of Akintola's supporters which continued up to the eve of the military seizure of power on January 15, 1966. This may be explained by the need not to present the true but embarrassing picture of an unstable polity to visiting Commonwealth leaders who were expected in Nigeria at the Commonwealth Heads of Government Conference in January 1966. Yet, the evidence is overwhelming that it was the partisan involvements of the "editorial staff, reporters and sub-editors" of the newspaper which so compromised and eroded its independence that "political party functionaries had advance knowledge of the contents" of *Daily Times* of Nigeria publications (Jose, 1987, p. 194). In fact, amidst rumors of an impending military coup d'état the *Daily Times* of December 4, 1965 had editorialized on the "Army and Politics". The editorial had justified military intervention if politicians upset the balance and gave the military an opportunity "to assume the role of politicians…" The

newspaper's editorial of January 18, 1966 , welcoming the military seizure of power on account of politicians' excesses which had constrained the flourishing of parliamentary democracy in Nigeria can, therefore, only be appreciated in the context of "a newspaper which was foreign-owned and somehow always found reason for supporting the Establishment" (Enahoro,1968, pp. 29-30).

On its part, the *Pilot* intensified and made even more brazen its partisan role during the 1965 Western Nigeria parliamentary elections and its aftermath. It failed to deploy the weapon of objectivity to serve the public good, choosing, instead, to promote the journalism of bias which robbed it of much credibility. McQuail (2013) as well as Schudson and Anderson (2008) note that media objectivity enhances public support for the media of mass communication by increasing their credibility, reliability and capacity to promote trust between the governors and the governed. Credibility gap between the media and its variegated readerships robs it of the legitimacy so essential to facilitate its role in the advancement of the democratic process.

A perusal of the pages of the *West African Pilot*, including editorials conveyed the erroneous impression that the 1965 parliamentary election in Western Nigeria was intraparty, UPGA affair. It retained its characteristic sensational, screamer headlines in which it created tension, even before the post-election violence erupted in the region, while in reporting the violence it painted the picture of a civil war. Not only did it deprecate the NNDP in its editorials,

but in its letter to the editor column it was obsessed with why UPGA must win. Thus its October 11, 1965, election -day front-page report on "West goes to the polls today, decision day for Westerners" was its appeal to the electorate to "Vote the UPGA". The report was complemented with a list of UPGA candidates in which it literally announced the election results in favor of UPGA. The day's editorial was the *Pilot's* "plaintive summons", on all eligible voters to "vote for UPGA". Its lead story of October 13, 1965, "UPGA forms West Govt/ Sequel to 68-25 seats victory over NNDP" was to report that Dauda Adegbenro, the UPGA candidate had constituted "an interim government of Western Nigeria", while describing the official result in favor of NNDP as false, and "No Victory". Above all, its editorials during the post-election violence were a singsong about the urgency and imperative of the declaration of a state of emergency in Western Nigeria. Its editorial of November 3, 1965 was characteristic, namely "emergency, emergency, and yet more stringent state of emergency is the only reasonable answer" to the "violence, arson, looting" and the general state of lawlessness in Western Nigeria.

Obviously, the *West African Pilot's* reports and editorials on the parliamentary elections and its aftermath drew attention to the enormity of the crisis. But this was done with the narrow objective of ensuring Akintola's loss of power willy-nilly either to the opposition, or to a sole administrator. When this failed it withdrew its editorials and focused its headlines on sensationalizing

the continuing violent eruptions in parts of the region. Although it subsequently stopped reporting the crisis and began, like the *Daily Times,* to support Nigeria's preparations to host the Commonwealth Heads of Governments' Conference, it still gave prominence to NCNC and University of Lagos students' demonstrations against the timing of the conference. Thus the *Pilot* conveyed the depth of popular anger, mirrored by the widespread postelection violence and was not therefore complicit in the loss of life caused by the failure of government to adopt timely, remedial measures as previously generalized (Chick, 1971, p. 121).

On the other hand, the federal government -owned *Morning Post* perpetuated its role as government megaphone. It thereby failed to play any noteworthy role as a medium of debate, persuasion and consensus building demanded by the fractious ethno-regional politics of the period. Not concerned with profit margins, given that it was funded by the federal government, its partisan ties could not be weakened by market forces-induced independent journalism. Thus it sided with the West regional government of Akintola which also enjoyed federal government's support during the 1965 election and its aftermath, and failed to report the crisis. For instance, it had justified the pre-election ban on public meetings and processions, which it blamed on the electorate's previous acts of violence. Besides, unlike the *West African Pilot* which had canvassed support for the UPGA on election- day, the *Morning Post* articulated

"why the NNA must get in." It also reported the killing of an electoral officer allegedly by UPGA supporters, as a further justification of the regional government's outlawing of public processions, and a strong basis for government to stamp out such acts of brigandage by all means, including re-imposing Akintola on his people. Its report of October 20, 1965 emphasized Balewa's assertion that the post-election violence, which in any case it claimed had been stamped out, was incited from the Eastern region. Therefore, it gave prominence in its report of November 3, 1965 to messages of solidarity by emirs and chiefs of the Northern region for the prime minister.

The newspaper's attitude was guided by its stand that the election, against all known evidence, was free, fair and won by the NNDP. The evidence shows that the election was characterized by massive rigging and other forms of irregularities, including the deliberate refusal to count the votes and declare results. A notable case was that of the Egba South 1 Constituency where the votes of the UPGA candidate, Dauda Adegbenro, were not counted by November 4, 1965, over three weeks after the election. There was also the arbitrary return of 16 NNDP candidates as unopposed, even where the opposition fielded or was obstructed from fielding candidates .The NNDP had proceeded to singlehandedly form the government of the region amidst widespread killings and destruction of lives and property, during which the police and the federal government lost the nerves to maintain law and order.

The government of Western Nigeria had, in the circumstance, imposed curfews in five districts of the region on November 5, 1965 (Ojigbo, 1979, pp. 87-90). Yet, the prime minister told the *Daily Times* of November 17, 1965 that:

> even if the situation in any part of the country was such that there were killings, it would still have to be established that there was fear of two Premiers exercising governmental powers in the region concerned before the Federal Government could step in to declare a state of emergency… there is a sharp contrast between the events in 1962 and the present political situation in the region. In 1962, it was a case of two rival Premiers and two governors, and the Federal Government had no alternative than to declare a state of emergency. With the present situation there is a legally constituted Government in the region even though there might be political disagreement.

So discredited was the election, with its attendant bloodshed that the chairman of the electoral body, Eyo Esua, publicly questioned its outcome. For his action, the *Morning Post* in various editorials, November 21-28, 1965 embarked on "Eyo Esua Must Go" campaign. Esua's subsequent resignation thus came as a welcome relief to the newspaper which continued to propagate the false impression that there was peace in the region. Such was the level of its self- delusion into which the

regional premier and the prime minister were sucked that the military coup d'état of January 15, 1966 caught the newspaper napping. Thus the newspaper had reported in its first edition of January 17, 1966 that "2 Days after Mutiny/ Federal Troops in Full Control". Its second edition reflected the reality that "Army Takes Charge," but the *Morning Post* maintained its editorial support for the NPC faction of the coalition government until it reported on January 19, 1966 that "NPC give support to Ironsi." It is instructive that the *Morning Post's* editorial of January 18, 1966 blamed the military intervention on politicians who had shown "contempt for public life" and behaved "like spoilt, naughty children." It particularly castigated the "former regime" for overlooking a groundswell of discontent from the few who had dared to speak truth to power. It found the ousted regime guilty of "corruption, graft, nepotism, tribalism", and concluded that Nigerians were "glad and grateful" about the new dawn in their country. It is apt to add that the *Morning Post* was characterized by a blind and fawning support, defense and justification of all the failings which it had blamed solely on the political class. Obviously, the editor of the newspaper failed to exercise his discretion as a professional journalist in the discharge of his duty. Indeed, the *Nigerian Morning Post* was characterized by much partisanship and sycophancy in its editorial policy towards the federal government vis-à-vis the opposition, to the detriment of the journalism profession in Nigeria (Echeruo, 1974, p. 52).

Like the *Morning Post*, the *Daily Express* failed to serve as an arena for public debate and persuasion as well as an instrument to foster a pluralist democratic ideal in furtherance of its expected function as the guardian of the people's liberty. Rather it fully supported Akintola during the elections and the post- election crisis. In fact, the two newspapers adopted the same position that the ban on public procession was designed to deter political violence, and therefore welcome. However, unlike the *Morning Post*, it gave space to the preparations of both alliances of parties for the election as well as UPGA's condemnation of "West bill on nomination" and "Security law for Unopposed", in its reports of September 17-18, 1965. But its editorial of September 18, 1965 calling for peace in the region insisted that no law was too harsh to disarm political thugs. It similarly defended the law on unopposed candidates, which it viewed as undemocratic but welcome measure to deter political killings. Unlike the *Morning Post*, it also gave equal front page coverage to the manifestoes of the parties, which it reprinted side-by-side in its inside pages on October 7, 1965. Its report on Election Day of the killing of an electoral officer ,which incident it viewed, like the *Morning Post,* as a justification for the ban on public meetings formed the subject of its editorial, "Western Nigeria first". The editorial had urged politicians to eschew open violence and to accept the verdict of the electorate at the polls.

This inclination of the *Daily Express* towards editorial independence, however, gave way to unbridled support of government in the election aftermath. For instance, it upheld Akintola's victory at the polls despite massive electoral irregularities, and reminded all, in the face of the post-election violence, that government had a duty to maintain "Law and order in the West." It therefore urged the government to employ every means at its disposal to hunt down the sponsors of the "political disorders". This was its endorsement of the prime minister's claim that the violence was instigated from outside the Western region. Against this background, its report of November 19, 1965 gave prominence to the prime minister's assertion that there was "No case for Emergency in the West." It also, like the *Morning Post*, chastised Eyo Esua, in its editorial of November 22, 1965 for his letter to the West regional governor in which he complained about impediments to his electoral body's credible and efficient performance of its duties. Yet, the *Daily Express* of November 1, 1965 had declared itself an "independent newspaper" while it rebuffed NCNC accusation of partiality in its reports and comments on the crisis as "political blackmail."

The evidence shows that the *Daily Express* had become apprehensive about its future profitability and viability, on account of its stance on the post-election crisis. It was caught between the political machinations of the parties contending for power in the region and had attempted to steer a via media, as reflected in its reports before and after the election. Such a course had exposed the *Express* publications to pressures from both sides without necessarily adversely affecting its circulation and financial position (Grant, 1971, p. 100), partly causing Thomson to cease the publication of the *Express* newspapers on November 23, 1965 (Agbaje, 1992, pp. 171, 174). Barton (1979) provided further evidence that Nigeria's prime minister's pressures were ultimately responsible for the character and sudden closure of the *Express* newspapers in 1965. In collaboration with Anthony Head, the British High Commissioner to Nigeria he had concluded arrangements to acquire the *Express* and merge it with the *Post* to produce the *Post Express*. *The merger was conceived* as a way to counter the hostile disposition of Action Group newspapers, as well as the *Daily Times* Group which he could not easily manipulate (pp.39-42).The assassination of Balewa in the January 1966 coup d'état, however, aborted the project.

CONCLUSION

The Nigerian press, contrary to conventional wisdom on the subject, did not watch-dog or gate-keep the realm. It, therefore, contributed little to deepen democratic ethos during the first quinquennium of Nigeria's independence. The press arena paraded Nigeria's seasoned journalists who had cut their wisdom teeth in journalism practice under colonial rule. But the experience which they had accumulated under colonial rule for which the Nigerian press gained a reputation for its competitiveness, irreverence, vibrancy, variety of political

content, pungency of views, independent journalism and editorial independence was not brought to bear in the performance of their roles during the period covered by this study. Instead, the press generally acted as megaphones or repeater stations of Nigeria's feuding politicians. They were too attached to members of the political class or had been too co-opted into that class to perform any role which would cast them in the mold of guardians of the realm who exposed the governments and politicians to the public gaze and independent, non partisan criticisms. In the circumstance, they failed to facilitate information flow between the governors and the governed, and could therefore not provide a medium of debate of government policies. Nor could they serve as credible communication channels through which politicians could solicit for votes by offering their programs to and providing the people with a platform to make informed choices. Rather, they danced where politicians led them in their reportage and comments on the issues that dominated the political arena. This tendency was clearly illustrated by the Action Group crisis and its aftermath as well as the undemocratic manifestations that characterized the 1965 parliamentary elections in Western Nigeria. Indeed, the press served as the propaganda instrument, in varying degrees, of the feuding, power hungry, ethno-regionally oriented politicians of the day. It did not represent or give expressions to the voices of the governed, or advance the cause and interest of the marginalized, and thus negated the normative media theory. This study thus validates Bretton (1962)'s assertion that the competition which existed in the Nigerian press was not professional, but related, instead, to "political party propaganda function and thus not designed to inform, enlighten or educate" (p. 107). The evidence shows that the media was neither democratized nor contributed to the achievement of democracy during the period, but was dependent on society which it also mirrored. Western media theories related to democracy, including McQuail's normative theory as opposed to the processional or historical approach borne out of the African experience, are, therefore, inadequate to fully comprehend and authoritatively establish the trends and patterns of press' contribution to the democratic process. This study of Nigeria's First Republic has hopefully illustrated the point.

ACKNOWLEDGMENTS

REFERENCES

Abasiattai, M. B. (1999). African history in the 21st century: Perspectives on newer uses of history and historians in and outside academia. In *A Presidential Address at 44th Congress of the Historical Society of Nigeria (Abuja)* (pp. 21-24). University of Abuja, Nigeria.

Africa Report. (1963, November). Africa: A country-by country situation report. *Africa Report*, *8*(10), 8-52.

Agbaje, A. (1989). Mass media and the shaping of federal character: A content analysis of four decades of Nigerian newspapers (1950-1984). In Ekeh, P. P. & Osaghae, E. E. (Eds.), *Federal character and federalism in Nigeria (*pp. 98-127). Ibadan: Heinemann Educational Books (Nigeria).

Agbaje, A. A. B. (1992). *The Nigerian press, hegemony, and the social construction of legitimacy, 1960-1983.* Lewiston: The Edwin Mellen Press.

Ake, C. (1991). History as the future of social sciences. (9), 19-27.

Akinfeleye, R. (2008). Democracy, the media and national interest. In Akinfeleye, R. (Ed.), *Contemporary issues in mass media for development and national security (*pp. 2-9). Ibadan: Malthouse Press.

Akintunde, J. O. (1967). The demise of democracy in the first republic of Nigeria: A causal analysis. *Odù: Journal of Yoruba and Related Studies*, *4*(1), 3-28.

Ayeomoni, M. O. (2012). The Languages in Nigerian socio-political domains: Features and functions. *English Language Teaching*, *5* (10), 12-19.

Barton, F. (1979). *The press of Africa: Persecution and perseverance*. London and Basingstoke, UK: The McMillan Press LTD.

Barton, K.C. (2005). Primary sources in history: Breaking through the myths. *Phi Delta Kappa International, 86*(10), 745-753.

Bretton, H. L. (1962). *Power and stability in Nigeria: The politics of decolonization*. New York: Frederick A. Praeger.

Chick, J. D. (1971, July). The Nigerian press and national integration. *Journal of Commonwealth Political Studies*, *9*(2), 115-133.

Coker, I. H. E. (1968). *Landmarks of the Nigerian press: An outline of the origin and development of the newspaper press in Nigeria 1859 to 1965*. Apapa, Lagos: Nigerian National Press.

Crowder, M. (1987). Whose dream was it anyway? Twenty-five years of African independence. *African Affairs, 86*(342), 7-24.

Diamond, L., Kirk-Green, A., & Oyediran, O. (Eds.). (1997). Transition without end: Nigerian Politics and Civil Society Under Babangida. Colorado, United States: Lynne Rienner Pub.

Dudley, B. J. (1982). *An introduction to Nigerian government and politics*. London: Macmillan Press.

Emenanjo, E. N. (Ed.). (1990). *Multilingualism, minority languages and language policy in Nigeria since independence.* Agbor, Nigeria: Central Books in Collaboration with the Linguistic Association of Nigeria.

Enahoro, P. (1968). Why I left Nigeria. *Transition: A Journal of the Arts, Culture and Society*, *7*(36), 27-30.

The Federal Ministry of Information. (1963). *Federation of Nigeria parliamentary debates, first parliament, third session, 1962-63: House of Representatives, Vol. II. April 9-May 29.* Lagos: The Federal Ministry of Information.

Grant, M. A. (1971, July). Nigerian newspaper types. *Journal of Commonwealth Political Studies, 9(2),* 95-114.

Hachten, W. A. (1971). *Muffled drums: The news media in Africa*. Iowa: Iowa State University Press.

Hanitzsch, T., & Vos, T. P. (2018). Journalism beyond democracy: A new look into journalistic roles in political and everyday life. *Journalism*, *19*(2), 146-164.

Harcup, T., & O'Neil, D. (2017). What is news? *Journalism Studies, 18*(12), 1470-1488. Retrieved September 30, 2017 from https://doi.org/10.1080/1461670x.2016.1150193

Hopkins, M. W. (1970). *Mass media in the Soviet Union.* New York: Western.

Jebril, N., Stetka, V., & Loveless, M. (2013). Media and democratization: What is known about the role of mass media in transitions to democracy. Oxford: Reuters Institute for the Study of Journalism. Retrieved March 10, 2017, from http://reutersinstitute.politics-ox.uk

Jones, A. (nd). The many uses of newspapers. (pp. 1-38). Retrieved February 2, 2017 from http://pdfs.semanticscholar.org/17c5/45cbebf3cb856508da4814571e39991038a8.pdf.

Karppinen, k. (2013). Uses of democratic theory in media and communication studies". *Observaterio* (OBS), *7*(3), 1-17. Retrieved March 10, 2017, from www.scielo.mec.pt/scielo.php?script=sci_arttext&pid=51646-5954201300030000

King, C. (1967). *The Future of the Press*. London: MacGibbon & Kee.

Lucas, L. (1981). The historian in the archives: Limitations of primary source materials. *Minnesota Historical Society,* 227-232.

Mackintosh, J. P. (1966). The Action Group: The crisis of 1962 and its aftermath. In Mackintosh, J. P. (Ed.), *Nigerian government and politics* (pp.427-460). London: George Allen & Unwin.

Mackintosh, J. P. (1962). Electoral trends and the tendency to a one party system in Nigeria. *Journal of Commonwealth & Comparative Politics*, *1*(3), 194-210.

McQuail, D. (2013). *Journalism and society.* London: Sage. https://doi.org/10.5771/1615-634x-2014-4-675

Meredith, M. (2006). *The state of Africa: A history of fifty years of independence*. London, UK: The Free Press.

Mordi, E. N. (1999). Ethno-regional origins of Nigeria's federalism: A study of the travails of democracy in post-colonial Nigeria. *44th Congress of the Historical Society of Nigeria*. University of Abuja, Abuja.

Mordi, E. N. (2011). Postwar propaganda as public relations: British containment of militant nationalism in Nigeria, 1945-60. *The International Communication Gazette*, *73*(3), 198-215.

Mwangi, S. C. (2010). *A search for an appropriate communications model for media in new democracies for Africa. International Journal of Communication, 4,* 1-26.

Nordenstreng, K. (1997). Beyond the four theories of the press. *Journalism at the crossroads. Perspectives on research*, 47-64.

Nyamnjoh, F. B. (2010). De-westernizing media theory to make room for African experience. In *Popular media, democracy and development in Africa* (pp. 35-47). Oxon: Routledge.

O'Connell, J. (1967). The inevitability of instability. *Journal of Modern African Studies*, *5*(2), 181-191.

Ojigbo, A. O. (1979). *200 days to eternity: The administration of General Murtala Ramat Muhammed*. Ljubljana, Slovenia: Mladinska Knjiga.

Fred, I. A. O. (1978). Press and Politics in Nigeria, 1880-1937. (Ibadan History Series.) *The American Historical Review*, *84*(3), 820-821.

Osaghae, E. E. (2011). *Crippled giant: Nigeria since independence*. Ibadan, Nigeria: John Archers Publishers.

Potter, E. (1975). *The Press as opposition: The political role of South African newspapers*. London, UK: Chatto & Windus.

Schudson, M., & Anderson, C. (2008). News production and organizations: Professionalism, objectivity, and truth seeking. *The Handbook of Journalism Studies*, 88-101.

Schwarz, F. A. O. (1965). *Nigeria: The tribes, the*

nation or the race- the politics of independence. Cambridge: The Massachusetts Institute of Technology Press.

Schwarz, W. (1968). *Nigeria*. London: Pall Mall Press.

Seymour-Ure, C. (1974). *The Political Impact of Mass Media* (Vol. 4). London, UK: Sage.

Sklar, R. L. (1955). Contradictions in the Nigerian political system. *Journal of Modern African Studies, 3*(2), 201-214.

Sklar, R. L. (1983). *Nigerian political parties: Power in an emergent African nation* (Paperback ed.). New York: NOK Publishers International, by arrangement with Princeton University Press.

United Nations Educational, Scientific and Cultural Organization. (1964). *World communications: Press, radio, television, film.* Paris: UNESCO.

Wasserman, H. (2011). Introduction. In Wasserman, H. (Ed.), *Popular media, democracy and development in Africa* (pp. 1-16). Oxon: Routledge.

Wells, A. (1974). Mass media in Africa. *Mass Communication: A world view, 91-111. California*: National Press Books.

The Promotion of Engineering Students' English Presentation Ability Using the Genre-Based Approach

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ABSTRACT

The purposes of this research were to examine the presentation ability achievement of fourth-year undergraduate engineering students at King Mongkut's University of Technology North Bangkok, Thailand after they studied how to give investigation report oral presentations using the genre-based approach (GBA), and to determine the attitudes of the students towards the GBA. Data were collected using pre- and post-tests, a questionnaire, semi-structured interviews, and student logs. The results revealed that the employment of the GBA in teaching oral presentations was effective, and the students' attitude toward the genre-based lessons was positive. Learning how to write investigation reports prior to how to present them familiarized the students with the vocabulary and other important information for the presentations. The lessons allowed the students to practice with constant feedback and support from the teacher and their peers, leading to better achievement on the post-test and a positive attitude toward the teaching method.

Keywords: English for specific purposes, genre-based approach, teaching oral presentations

INTRODUCTION

One of the goals of teaching English for specific purposes (ESP) is to serve the learners' linguistic needs directly pertaining to their future career. In order to help them in their future work, undergraduate engineering students also need to take ESP courses in order to fulfill their professional roles satisfactorily. Giving oral presentations in English is one of engineers' language communication skill requirements (Radzuan & Kaur, 2011; Rajprasit, Pratoomrat,

Wang, Kulsiri, & Hemchua, 2014; Suwa, Miyahara, & Ishimatsu, 2012); yet many experienced Thai engineers do not have sufficient skills in discussion, business negotiation, or face-to-face communication with foreign professionals (Hart-Rawung & Li, 2008). Managers and supervisors report that their engineers lack the ability to present information in English (J. Kiatpipat, personal communication, January 10, 2011; W. Rattanaburi, personal communication, March 15, 2011), and engineering students themselves have numerous similar concerns (Changpueng, 2012; Radzuan & Kaur, 2011; Rajprasit, Pratoomrat, & Wang, 2015). It has been argued, unfortunately, that novice engineers' lack of confidence in oral communication and reading ability results from educators' failure in preparing them for ESP communication (Jarupan, 2013; Rajprasit, Pratoomrat, Wang, Kulsiri, & Hemchua, 2014).

Engineers are frequently required to write investigation reports—discussing problems, for instance, with products or machines in their workplace and solutions to those problems—and then present them. However, giving presentation in English is not easy for them. Presenting in English can be categorized as *talk as performance* (Richards, 2008), and is a distinct form of speaking that "often follows a recognizable format … and is closer to written language than conversational language" (p. 27). Such a statement shows that it would be difficult for students studying general English to apply the knowledge from the classrooms to the specific contexts of their jobs where

a certain rhetorical style and sequence and specific language use take prevalence (Brown, as cited in Nation & Newton, 2009). This means that we need to find a teaching method that helps students comprehend and recognize rhetorical styles, the sequencing of content, and specific language patterns in giving presentations in English directly related to their profession.

In order to meet the needs of engineering students in terms of being able to present investigation reports in English, the genre-based approach (GBA) to English teaching is employed in the present research, as the GBA focuses on explicit teaching (Hyland, 2007), where students can see patterns or formulae and the sequences of information in giving presentations clearly. It is expected that students will be able to provide oral presentations well if they understand the patterns and forms of presentations. Engineers normally give technical presentations that require a pattern or formula, such as presenting reports, projects, and job progression. According to Webster (2002), employing particular genres in communication involves choosing pre-determined linguistic formulae for achieving the purposes, and students need to learn these linguistic formulae in order to communicate successfully. Since engineers' presentations of investigation reports are rather similar in structure to written reports, the researchers have adopted the GBA for teaching presentations in this study in order to extend the application of the GBA, and to find more effective ways to help students learn to use English in their specific

contexts. Some research has been carried out to investigate the effectiveness of the GBA in teaching how to give oral presentations. Webster (2002), for example, investigated the effectiveness of the GBA with an advanced Japanese English communication class for a semester. The results revealed that the students were able give presentations well. Further, Miyata (2003) employed the GBA to compare students' oral presentation ability and the self-confidence of advanced business English students at Rajamangala Institute of Technology, in Chaingmai, Thailand, focusing on presenting various types of information in a company, such as company profiles and product descriptions. It was found that the students' oral presentation skills improved after learning through the GBA. Their self-confidence also increased after the lessons. However, not many studies have focused on the GBA in terms of teaching engineering students whose English is not at the advanced level how to give presentations. The present study aims to fill this gap by teaching engineering students whose English is not at the advanced level how to give oral presentations in English using the GBA.

The research questions are as follows:

- What is the presentation ability achievement of students receiving instruction based on the GBA?

- What are the attitudes of students toward GBA-based presentation instruction?

LITERATURE REVIEW

Oral Presentations

As mentioned earlier, engineers frequently give oral presentations (Kassim & Ali, 2010), so students need to be prepared in order to be more competitive and successful engineers in their future workplace. Whether it is for academic or professional purposes, familiarizing students with the genre of presentations is crucial for their communicative achievement (Swales, 1990).

Although oral presentations are vital, it has been found that Asian students rated giving oral presentations as the most stressful communicative event (Woodrow, 2006). King (2002) viewed oral presentations as "a face-threatening activity" and stated that "speech anxiety and limited presentation skills were the major problems that lead to learners' oral presentation failures" (p. 1). In order to solve some of the problems in giving oral presentations, it is imperative that the teacher choose an effective teaching approach. There are some important rules in giving effective presentations. For example, Noor, Manser and Atin (2010) suggested that you needed to structure the presentation so that you would know how to arrange the time in each part of it. In addition, the presentation materials should be simple and have a logical sequence. Finally, the content should consist of an introduction, body, and conclusion (Munter & Russell, 2002; Noor, Manser & Atin, 2010).

The Genre-based Approach

Genre is not a new concept; it has been studied for quite a long time. Therefore, its meaning varies based on the viewpoints of different scholars. For example, "genre has been defined as a class of communicative events, such as seminar presentations, a university lecture, or an academic essay" (Paltridge, 2004, p. 2). In this study, the definition of genre will be discussed in relation to the ESP genre.

The definition of the GBA involves three characteristics (Kay & Dudley-Evans, 1998). First of all, it aims to make learners aware of the structure and purpose of the texts of different genres—the significant features. Secondly, the GBA uses the results from the genre analysis as an example for teaching and learning. Finally, understanding texts in terms of linguistics is not enough; understanding the accompanying social context is also needed. In this study, therefore, the GBA is defined as a method to teach oral presentations; it focuses on making students aware of the purposes of spoken texts, their linguistic features, the relationship between the linguistic features and the purpose of each move, and the organization of genres.

The details of the GBA instruction was based on the different schools of the genre. There are currently three schools of genre (Hyon, 1996)—Systematic Functional Linguistics (SFL), New Rhetoric (NR) and English for Specific Purposes (ESP)—each school focusing on different aspects with some overlapping of definitions. For example, SFL sees genre as a social

process since the members of a culture interact with each other to reach their goals (Hyland, 2007). Therefore, when they want to communicate they need to choose appropriate language based on the types of activities, the relationship of the participants, and the role of language (e.g. spoken and written language). With respect to NR, this concept lies more in the relation between texts and contexts, focusing less on the structure of the text. Texts are considered as purposeful and as interacting with context in order to achieve social action (Miller, 1994). Moreover, NR places less emphasis on the genre theory of teaching text form and pays more attention to helping native or L1 university students understand the social functions of genre and the contexts in which these genres are used (Hyon, 1996). In contrast to NR, ESP focuses on the details of the formal characteristics of genre. ESP aims to help learners recognize and learn the patterns of language required in various academic and professional contexts (Hammond & Derewianka, 2002). Most studies involving the ESP concept concern non-native English speakers in the academic and professional areas (Hyland, 2007). The definition of the ESP genre in the view of Swales (1990), who is a pioneer in this area, is as follows:

> *A genre comprises a class of communicative events, the members of which share some set of communicative purposes. These purposes are recognised by the expert members of the parent discourse community and thereby constitute the rationale for*

the genre. This rationale shapes the schematic structure of the discourse and influences and constrains choices of content and style (p. 58).

The definition above explains that if the people in a communicative event shares a common focus regarding the purposes of the communication, the event constrains and shapes the schematic structure, and these events constitute a genre. In this study, the definition of ESP focuses on Bhatia's work. Bhatia's (2004) definition focuses more on the purpose of communication, its conventions, and its constraints as their communicative patterns. Genre is "language use in a conventionalized communicative setting in order to give expression to a specific set of communicative goals of disciplinary or social institution, which gives rise to stable structure forms by imposing constraints on the use of lexico-grammatical as well as discoursal resources" (Bhatia, 2004, p. 23). These ESP definitions of genre have led to many studies in this field, such as genre analysis (Bhatia, 1993; Henry & Roseberry, 2001; Pinto dos Santos, 2002; Yakhontova, 2002). Some concentrate on students both at the graduate and undergraduate levels by applying the results of genre analysis (Changpueng, 2013; Cheng, 2006; Henry & Roseberry, 1998). In this study, ESP genre is seen as a recognizable and recurring spoken pattern that meets the various communication needs and purposes of members of the engineering community. Its conventional linguistic and rhetorical features reflect the functions, purposes, and contexts of the engineering

community that produces them. These contextual and cultural constraints are recognized by members of the engineering community.

In the present study, the focus is placed on the ESP and SFL concept. This study adopts the concept of genre analysis (ESP genre) to teach students. That is, the oral presentation lessons were created based on the results of genre analysis (investigation report of engineers). However, ESP does not suggest how to teach writing or speaking in each genre by applying genre analysis results in the lessons. Therefore, the teaching stages in this study were created based on the concept of SFL. This is what they call teaching and learning cycle. It was found that the teaching stages suggested by SFL, whose details would be explained in the next section, were very useful and effective.

Genre Analysis

Genre analysis is an important concept in the field of ESP because it is a way to help learners understand how schematic structure and linguistic features are related to each other and to its purpose of the genre, including the sequencing of the structure. Dudley-Evans and St. John (1998) explained that genre analysis was textual analysis emphasizing the regularities of structure that distinguished one type of text from another type. Hyland (2003) argued that genre analysis, in linguistics, was related to describing the higher level organization and structures of written and spoken texts. The objective of genre analysis is to find a link between the linguistic features of a genre

and the action they perform (functions, purposes). Swales had developed a technique to analyze genres (genre analysis) into a hierarchical schematic structure that he called move-step (Swales, 1990). In conclusion, what we receive from genre analysis is the organization of a genre or what we can call moves and steps, including the linguistic features to help learners write or speak similarly to people in the professional community. In this study, the genre analysis concept was adopted for the teaching lesson section.

Genre-Based Approach Instruction

At the heart of the genre-based approach (GBA) instruction is teaching students how to use the organization of each genre or results of the genre analysis to accomplish coherent and purposeful prose. In other words, the teacher needs to help the students speak in order to achieve some specific purposes. There are a few important terms underpinning the concept of genre instruction: social constructivism, explicit teaching, and the teaching and learning cycle.

Social Constructivism. It was in the 1930s that Vygotsky developed his theory, constructivism. According to Mace (1994), the major theme of Vygotsky's theory was that social interaction played a fundamental role in the process of cognitive development. This is because when learners encounter something new, they have to reconcile it with their previous knowledge and

experience. Vygotsky (1978) believed that this long process of development depended on social interaction and that social learning actually led to cognitive development. This process of learning is called the Zone of Proximal Development (ZPD). It means that a student can perform a task under adult guidance or with peer cooperation that cannot be achievable alone. The notion of ZPD is applied to pedagogy through the concept of scaffolding (Bruner, 1990). This concept claims that employing scaffolding in lessons is necessary since learners can write better with learning and practicing with teachers and friends (Emilia, 2005; Kongpech, 2006).

Explicit Teaching. This term offers the students an explicit understanding of how texts in target genre are structured and why they are written in certain ways to achieve their communicative social purpose are required (Hyland, 2003). In this study, the focus was placed on spoken language. In addition, students have to know the lexico-grammatical patterns that are typically used to express meanings in the genre in order to create a well-formed and effective text (Hyland, 2007).

Teaching and Learning Cycle. The teaching and learning cycle is a common teaching stage designed for teaching writing based on the GBA, especially for the Sydney School or SFL genre (Johns, 2003). Although the teaching and learning cycle is developed for the "SFL genre," it is believed that it can also be employed with the "ESP

genre." The detail of the cycle will be described in the teaching method section.

In conclusion, the conceptual framework consists of three main parts: giving oral presentations, the genre-based approach (ESP genre, SFL genre, genre analysis), GBA instruction (social constructivism, explicit teaching, and the teaching and learning cycle), as can be seen in Figure 1.
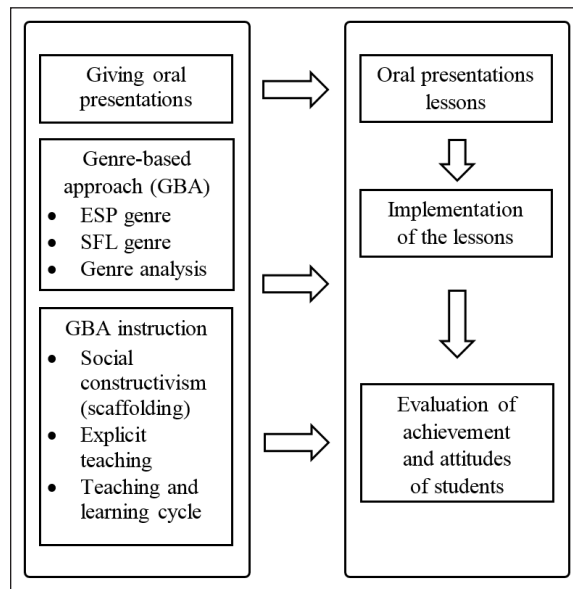
Figure 1. The conceptual framework of this study

METHODS

Analysis of the quantitative (pre-test, post-test, and a questionnaire) and qualitative data (semi-structured interview, student log) was employed in this study as a mixed-method research design (Tashakkori & Teddlie, 1998) to allow for triangulation of the data in order to strengthen the validity of the results (Wasanasomsithi, 2004). Both the student log and semi-structured interviews were used to cross-check the data regarding their attitude toward the teaching method via the questionnaire.

Participants

The participants consisted of an intact group 22 KMUTNB engineering students, so it was considered a rather small sample size. They enrolled in one section of the English for Engineers course at KMUTNB as an elective during the second semester of academic year 2014. They were fourth-year students studying in the departments of mechanical and electrical engineering. During the first year of their study, these students took three hours of English per week for two semesters as compulsory courses, whose focus was on learning the four skills in English. In the English for Engineers course, there were five lessons

during a 15-week period. The content of the course consisted of reading, writing request e-mails, job interviews, writing investigation reports, and giving presentations. Most of the materials and exercises for teaching presentations were created by the first author of the study based on the theory of the ESP and SFL genre, while some were adapted from Foley (2011) and Bhatia (1993).

Variables

In this study, the independent variable is teaching oral presentations using the GBA. The achievement of the students and their attitudes after studying the GBA lessons are the dependent variables.

Research Design

A one-group, pre-test and post-test design was adopted in this study in order to measure the effects of teaching investigation report presentations in English through the GBA (Fraenkel & Wallen, 2006). The participants were tested on their presentation ability at the beginning of the semester (pre-test), and were taught how to write investigation reports through the GBA during the first three weeks. This helped them to understand the structure of investigation reports, the purpose of each part of the report, the appropriate grammar of each part of the report, and the required vocabulary. After that, they studied how to give investigation report presentations for four weeks. The content from the writing practice helped the students to see how to organise the ideas in each part of the presentation, and the order

of the presentation, including the required expressions in each part of the presentation. The content also covered creating visual aids and the delivery of the presentation. The students then practised their presentations by using the content that they learnt from writing investigation reports. Finally, their achievement in giving presentations was tested in weeks 14 (post-test).

Teaching Materials

One of the main materials in the first part of this study was a list of moves and steps of engineering investigation reports (Figure 2), analyzed in an earlier study (Changpueng, 2009). Students need to comprehend the details of these moves and steps before beginning to practise presentations. The content of teaching presentations was divided into 3 parts: introduction, body, and conclusion (Munter & Russell, 2002; Noor, Manser & Atin, 2010). The expressions that could be utilized in each part were compiled by reviewing the related literature, interviewing engineers, and analyzing their audio presentation samples.

Teaching Methods

The teaching and learning cycle, proposed by scholars in the field of SFL (Figure 3), was adapted from teaching writing and employed as the teaching stages for oral presentations in this study. Figure 3 indicates that there are five teaching stages in this study. The main purpose of the cycle was to help learners become engaged in activities that could help them develop the

ability to comprehend texts (Hyland, 2007). Underpinning this teaching concept is the notion of scaffolding, which relies on social constructivism language acquisition theory (Feez & Joyce, 2002; Kongpetch, 2006).

Move 1: Statement of the problem (Obligatory)
Any of the following steps is acceptable; any combination of the following steps is possible.
　　　　Step 1 Identifying the problem
or/and　Step 2 Providing information

Move 2: Investigation process (Obligatory)
　　　　Step 1 Identifying the cause of the problem
or/ and　Step 2 Investigation in action

Move 3: Countermeasure (Obligatory)
Any of the following steps is acceptable; any combination of the following steps is possible.
　　　　Step 1: Permanent countermeasure
or/ and　Step 2: Immediate countermeasure

Move 4: Attachment (Optional)
Note: Move 4 and Move 3 step 2 are flexible; they can occur anywhere.

Figure 2. List of moves and steps of investigation reports written by engineers (Changpueng, 2009)
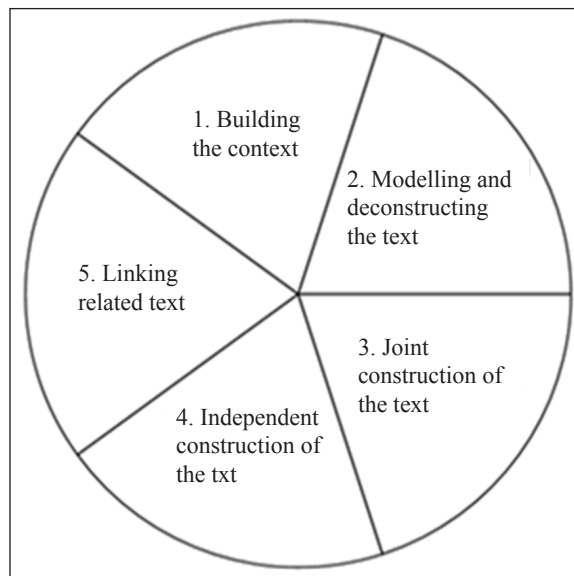
Figure 3. The teaching-learning cycle (Feez & Joyce, 2002)

Building the Context

The purpose of investigation report presentations and their context is introduced. The emphasis is placed on the functions of language and how meanings works in context. Many activities were used. For example, vocabulary exercises and group discussion were used as a warm-up activity. Additionally, listening to different types of short presentations was focused on here.

Modeling and Deconstructing the Text

The structure of presentations and the purpose of the three sections of giving presentations, introduction, body, and conclusion, are introduced. This also includes the language features that students could use in each part of the presentation. Therefore, many presentation models for each part of the presentation were distributed to the class and the students were asked to read and analyze them in groups. Together, these activities allowed the students to see the whole picture of a presentation, expressions, the linguistic features of each part, and the generic structures commonly used in giving presentations. To make the presentations more meaningful, the content of nonverbal delivery in presentaiton was needed after this. Many VDO clips were shown and the students were asked to criticize them.

Joint Construction of the Text

Before presenting independently in the next stage, the students were asked to practice presenting in peer work and group work. At this stage, they could make use of the knowledge that they learnt from writing reports. That is, the students practiced presentations according to the provided presentation situations and they needed to create their own scripts based on the structure of the investigation reports. The teacher walked around the classroom to provide the students with advice and feedback. At the same time, the students needed to give each other feedback according to the provided checklist.

Independent Construction of the Text

The purpose of this step was for the students to apply what they had learned in order to give their presentations independently, while the teacher supervised, encouraged, and advised them. All of the students needed to give a presentation in class two times with teacher feedback. At this stage, they could see their friends' performance and learnt from the teacher's feedback in order to improve themselves.

Linking Related Texts

This final stage gave the students the opportunity to investigate how the genre they had been studying was related to other texts that appeared in the same or in a similar context as the other genres they had studied, and to issues of interpersonal and institutional power and ideology.

Data Collection and Instruments

Pre-test and Post-test. In order to prove the effectiveness of the teaching method in terms of student learning, the students needed to complete the pre-test and post-

test. There was only 1 item in both tests that asked the students to show their performance in oral presentation.

The details of the test were created based on the test construction from the analysis of a specific purpose target language use situation (TLU) by Douglas (2000). The test was validated by three experts, and the IOC index was 1.

In the pre-test, the students were asked to give a presentation in English in groups of 3 to 4 members. They had to choose a topic from three provided topics, all based on investigation reports. They were allowed one hour to prepare for the presentation.

The post-test was an achievement test that would reveal the extent to which they had improved after attending the presentation lessons. The test was similar to the pre-test but it was set as a group project with a topic of their choice—which could be any topic related to investigation reports. They were asked to present in the auditorium of the faculty with the presence of people outside the class that they wished to invite. The evaluation criteria, announced in advance, consisted of using the correct language for each move, function, delivery, and fluency, covering all moves and appropriate vocabulary. The total raw score was 40. The test was scored by two raters, whose scoring was tested for correlation and reliability, and the results of their grading were then calculated using Pearson's product moment correlation coefficient (Wiboolsri, 2008). It was found that there was no significant difference in the grading between the two raters. The correlation value between the two raters of the test was 0.96.

Questionnaire. An attitude questionnaire, written in Thai in order to prevent a language barrier, was designed to evaluate the attitude of the students toward the GBA, and was completed at the end of the lesson. The questionnaire was created by the researcher of this study. The questionnaire was divided into two parts: the attitudes of the students after studying using the GBA (a five-point Likert scale) and suggestions about the teaching method (an open-ended question). The content consists of three components: teaching method, teaching activities, and speaking achievement. The reliability of the questionnaire was 0.88. The validity of the questionnaire was evaluated by three experts and the IOC index value was 0.9.

Interview and Student Log. A semi-structured interview and student logs were used to cross-check the data regarding their attitude toward the teaching method via the questionnaire as a triangulation technique. The interview questions were somewhat similar to the questions in the questionnaire in terms of the topics, consisting of three components: teaching method, teaching activities, and speaking achievement. The validity of the interview questions was evaluated by three experts and the IOC index value was 0.86. Five students, the number that represented more than 10 percent of all the students in the class, were randomly chosen to be interviewed one day after they completed the questionnaire.

As for student logs, there were two: after finishing the pre-test and after finishing the post-test, and the students were asked to write both of them. The questions for the pre-test concerned their problems in giving presentations, what they wished to improve, and their expectations from the course. After the post-test student log, the content of the student logs were divided into two parts. For the first part, the students were asked to write about their attitude toward the teaching method and learning activities in the lessons. The second part provided statements that concerned how many presentation problems they were able to solve. These statements were created based on the problems that the students wrote about in the first student log (after the pre-test). For example, "I know how to speak English in each part of the presentation and I know how to organize my ideas in presentations properly." The students chose the statements that they agreed with by marking them. The validity of the student logs was evaluated by three experts and the IOC index value was 0.9.

Data Analysis. The scores from the pre-test and post-test were compared by using a dependent samples t-test in order to examine the extent to which the method of teaching presentations used enhanced undergraduate engineering students' presentation achievement. Mean scores and percentages were used to determine the attitudes of the students towards the GBA through the questionnaire. In addition, the answers from the respondents in the interview session were analyzed using content analysis (Fraenkel & Wallen, 2006), as was the information in the first log (after pre-test). For the second log (after post-test), percentages were used to analyze the data.

RESULTS

The results are divided into two parts: the students' presentation ability achievement and the attitudes of the students towards the GBA.

Presentation Ability Achievement

From the pre-test and post-test scores among the engineering students in Table 1, it can be seen that the maximum score for the pre-test was 33.5 and 38.5 for the post-test. With respect to the minimum scores, the minimum score for the pre-test was 22, while it was 30 for the post-test. Thus, the mean for the pre-test was 28.4. The mean for the post-test was 35.5. The average score of 28.4 meant that the students had some background knowledge in giving presentations in English because the score was not too low. The mean score for the post-test (35.5) was higher than those for the pre-test (28.4). As for the post-test mean score (35.5), it showed that the students had improved their presentation ability quite a lot since the score was quite high. In addition, the t-test results revealed that the presentation ability achievement scores from the post-test of the students that were taught with the GBA were significantly higher than those on the pre-test ($p < 0.05$). This indicates that the GBA was effective.

Table 1
Comparison between the pre-test and post-test presentation ability scores using a t-test for the engineering students

Tests	N	Mean	S.D.	t	P
Pre-test	22	28.4	3.40	9.39*	0.00
Post-test	22	35.5	2.09		

*$p < 0.05$

Attitude towards the GBA

The results of the analyses indicated that most of the students had a positive attitude toward the GBA, as seen in the mean scores for each item of the questionnaire, which was higher than 3.5. For example, many of the students (item 1, mean score = 4.77) agreed that practicing presentations by studying writing investigation reports first was suitable for them. They also thought that the activities and exercises in the lessons helped them to improve their presentation ability (item 2, mean score = 4.59). They also indicated the following: practicing the presentation part by part made their learning easy to understand (item 5, mean score = 4.63); practicing the presentation using the GBA helped them know what they should say in each part of the presentation (item 6, mean score = 4.77). They also felt that they had more confidence in giving oral presentations (item 16, mean score = 4.50) and learned how to organize their ideas in each part of the presentations (item 20, mean score = 4.59). In addition, the average mean score for all of the items was 4.54. The students' positive attitude was confirmed by the results of the qualitative data (interview and student log).

Table 2
Attitudes towards the GBA

Items	Content	Mean
1	Practicing presentations by studying writing investigation reports first was suitable for me.	4.77
2	The activities and exercises in the lessons helped me to improve my presentation ability.	4.59
3	The content of the lessons was easy to understand.	4.63
4	The activities and exercises were suitable for my English background knowledge.	4.77
5	Practicing the presentation part by part made my learning easy to understand.	4.63
6	Practicing the presentation using the GBA helped me know what I should say in each part of the presentation.	4.77
7	Studying by noticing how to use English in presentations by reading samples, watching VDO clips, and CDs made me understand how to use English for presentations better.	4.36
8	Studying by noticing the delivery in presentations by reading samples and watching VDO clips improved my delivery skills.	4.36

Table 2 *(continue)*

Items	Content	Mean
9	Watching the VDO presentations of three engineers as examples allowed me to know the level of my presentation skills and to improve them.	4.50
10	Practicing presentations by studying writing investigation reports first was suitable because it was easier and more fluent for me to prepare the script for the presentation.	4.63
11	Studying how to give an investigation presentation after practicing investigation report writing made me feel comfortable in studying in presentations.	4.59
12	The time arrangement for practicing each part of the presentation lesson was suitable.	4.31
13	The feedback given by the teacher at the end of each session was suitable.	4.31
14	Studying the presentation lessons made me more knowledgeable.	4.68
15	The presentation lessons gave me more knowledge about how to make my presentation more interesting.	4.42
16	I felt that I had more confidence in giving oral presentations.	4.50
17	This teaching method made me more skillful in giving presentations.	4.63
18	The writing report lessons helped me understand how to arrange sentences.	4.40
19	The writing report lessons helped me understand how to organize information for presentations.	4.63
20	I learned how to organize my ideas in each part of the presentation.	4.59
21	I now know more vocabulary related to presentations.	4.54
22	The lessons made me aware of how to choose the language to be used with different people.	4.36

The student logs after doing the pre-test showed that many of the students thought that they could not do well with the presentation for many reasons; for example, they could not arrange the sentences in English or their ideas well, they did not know how to organize their presentation properly, they did not know the kinds of information that they should include in the presentation, they did not know the appropriate vocabulary, and they could not present fluently. In contrast, the student logs after the post-test showed that the students had positive attitudes towards the GBA because this teaching method helped them solve the problems mentioned in the first student logs (after pre-test); it also

improved their presentation ability. Table 3 reveals the students' opinions expressed in their logs (after the post-test student logs) after learning to give presentations using the GBA. In Table 3, the results showed that the problems that the students encountered during the pre-test could be solved after the treatment. This can be seen from the number of students that chose each item. For example, many students or 86.36% indicated that they knew how to speak English in each part of the presentation. This was interesting because it reflected what many students mentioned in the first log, that they did not know what they should say in each part of the presentation. Also, this result is similar to the results

in the questionnaire mentioned above in item 6. Next, 81.81% of the students agreed that they learned how to organize their ideas in each part of presentation properly. This result agrees with the result of the questionnaire (item 20) mentioned above as well. Many students also agreed that they had more confidence in giving a presentation in English. Additionally, this result is congruent with the result of the questionnaire (item 16). Further, 86.36% of the students thought that this teaching method could solve their problem concerning the use of English in connecting the parts of the presentation. This also confirmed that the GBA solved the problem that the students pointed out in the first student log.

In addition, the results of the student logs verified that the students liked the GBA because they agreed that studying by practicing writing reports first and then practicing presentations was valuable. This is similar to the result in questionnaire item 1 and 6 mentioned previously. For example, one student stated:

> *If we hadn't learned the details of the report first it would have been difficult for me to understand and make use of the specific terms that engineers use and also the information we should include in writing investigation reports. This could be hard for me in a presentation if I do not understand the information for the presentation clearly enough.* (S7)

Additionally, studying reports first enhanced their understanding of the organization in their presentation. As one student explained, "*understanding how to write reports first helped me to understand more how to organise and order the ideas in presenting those reports.*" According to another student, "*good report presentations require good quality reports first because they support each other.*" (S13)

In the same vein, the student answers from the interviews indicated the perceived benefits of the teaching method. The students agreed that they liked the teaching method in terms of practicing writing reports first and then learning how to present those reports. This was because they knew the content they should use in each part of the presentation. This result is similar to the results from the questionnaire and student logs mentioned above. This is shown in the following excerpts. For example:

> *I agree that practicing the presentation part by part was great. Studying like this helped me to understand well. For example, when I studied the first part that was about the introduction of presentations, I could see that there were many expressions that we can use to introduce a presentation. I didn't know about this before. This also helped me to see how to order the parts of a sentence, including how to link each part of the presentation.* (S1)

> *I agree that practising writing reports first and then practising presentations is a good idea. This is because understanding the written reports can help me realise what kind of information*

I need to provide in the presentation. Moreover, I understood more about the moves of written reports and their order in the presentation. This made it easy for me to give a presentation (S2).

In brief, according to the results of the test, it was found that practicing presentations through the GBA helped the students improve their presentation ability. This can be seen from the improvement in the scores, which were significantly higher in for the post-test. In addition, the congruent analysis results from the questionnaire, interview, and student logs revealed that the students had a positive attitude toward the GBA.

Table 3
Opinions of the students after studying how to give a presentation using the GBA from the second student logs (after post-test)

No.	Opinions	Percentage
1	I know how to speak English in each part of the presentation.	86.36
2	I know how to use English to connect each part of the presentation.	86.36
3	I know what I need to say in making an appropriate presentation.	86.36
4	I know my English presentation skills.	86.36
5	I know how to organise my ideas in presentations properly.	81.81
6	I know how to arrange sentences in English.	77.27
7	I have more confidence in presenting in English.	77.27
8	I know what the appropriate gestures and delivery are in presentations.	77.27
9	I know more vocabulary now about writing reports and presentations in English.	54.54
10	I can present reports more fluently now.	50

DISCUSSION

The results of this study confirmed that the GBA is a useful teaching method as it significantly fostered the students' oral presentation abilities. The students also had a positive attitude towards the GBA. As for the improvement in their presentation ability, this can be explained as follows.

First of all, the students learnt how to give oral investigation report presentations by first practicing writing investigation reports and then practicing giving oral presentations. This method of teaching enabled them to apply their knowledge from writing investigation reports together with what they learned about the structure, expressions, and delivery of giving oral presentations. Giving presentations is a kind of "talk as performance" (Richards, 2008), which is composed of a recognizable format and is also similar to written language, in which some language skills are also required for presentations, e.g. presenting in an appropriate sequence, using appropriate vocabulary, and using correct pronunciation and grammar. All in all, helping students

understand the parts of investigation reports, vocabulary, and grammatical points before practicing giving presentations is an effective method. In addition, another reason is that teaching with the GBA is explicit teaching, which helps the learners understand how target texts are structured and why they are written in the way they are (Hyland, 2007), a characteristic especially beneficial to EFL leaners, as they need to learn and practise the language (Khatibi, 2014). Further, Firkins, Forey and Sengupta (2007) argued that language in the view of genre-based pedagogy means an open dynamic system and it should be taught explicitly. With the explicit teaching in this study, for example, students could see the target vocabulary (in the first teaching stage), and how to organize the parts in giving a presentation after analyzing the sample texts in teaching stage two. At the same time, the students could also see the kinds of language and expressions that they can use in each move of writing investigation reports and giving presentations. This is similar to what Jones (as cited in Richards, 2008) had suggested, that analyzing written examples was interesting for practicing formal speech because it helped learners to understand how texts worked and what their organizational and linguistic features were (see also Chaisiri, 2010; Miyata, 2003).

The last factor that supported the improvement of the students was the teaching stages. The teaching stages in the presentation instruction using the GBA in this study were created based on Vygotsky (1978)'s theory of social constructivism.

The students learnt from interaction with people with more experience—the teacher and friends in their groups—and gradually increased their presentation ability through their support. This can be called scaffolding. Jones (as cited in Richards, 2008) suggested that talking as performance required preparation and much scaffolding, as with a written text. Many activities can be employed for this, such as providing examples or models of oral presentations. In teaching stage 3, the teacher helped the students practice speaking move by move. The students also learnt from the video of experienced engineers, and then practiced with their friends in groups. Additionally, apart from the feedback from the teacher, the students gave one another feedback from their own experience and the provided presentation checklist. During teaching stage 4, the students gave their presentation individually in order to demonstrate the improvement in their presentation ability after practicing many times, and were offered feedback from the teacher and their friends as well. This repeated practice and feedback allowed them to gain more confidence in giving presentations.

Regarding the attitude of the students after the treatment, the students had positive attitudes toward the GBA, as can be seen from the results of questionnaire, student logs, and interviews. This can be explained as follows. First, the students felt that they were able to improve their presentation ability, so they liked the teaching method. This also made them feel confident in giving a presentation in English. Next, the

students felt comfortable when practicing the presentation with their teacher and friends. This can be seen from the third teaching stages. For example, the activities in the third teaching stage made the students feel comfortable in studying because they did not study alone; the teacher and their friends supported them. With this relaxed atmosphere, the students were able to study comfortably. Thus, creating a non-threatening and safe learning situation is crucial for students (Hovane, 2009; King, 2002). The more relaxed the students are, the better will their language ability proceed.

Implications

The findings of this study reveal the usefulness of teaching oral presentations using the GBA, especially for engineering students. The GBA prescribes teaching stages to which EFL teachers can apply various activities for teaching their students. First, practicing the writing content of the target genre first helps students learn related vocabulary and grammatical points; then the students learn the parts or moves of the oral presentations. These two stages can be carried out by asking students to analyze examples of the text type; providing many examples for the students is important. The students can see the lexicon, language, and expressions that they can use in giving the presentation. To compare the research results with those of previous literature, the results of this study are similar to the studies undertaken by Atai and Khatibi (2010); Henry and Roseberry (1998), and Khatibi

(2014). In these studies, the gene analysis technique and explicit teaching proved useful to the learners. As for the teaching activities, not only do they need to practice analyzing examples of text types, as mentioned before, but they also need to learn from watching authentic samples of presentations, such as watching the presentation videos of engineers. This implication is similar to that of Miyata (2003), where it was thought that the students should learn from watching presentation VDO samples because they are similar to real presentations. Another important activity was scaffolding. It is crucial for the teacher to design scaffolding activities to help students see the whole picture, and then they can study the details of the presentation part by part. Then, they can practice together with their teacher and with their friends in groups. All of the scaffolding activities in the present study were able to help the students reach their goal and to be able to present their own information. This implication is in alignment with Webster (2002)'s notion in that what learners learn from basic scaffolding can lead them to their own particular context. At the same time, the teacher should point out how to give effective deliveries in presentations. According to the interview results, the students preferred multiple individual presentations with feedback, so the teacher should manage time to help them with this. Working together in groups is also an important teaching activity; students need to work with their friends and give feedback to one another both during the stages of giving

presentations and of analyzing the parts of texts, since analyzing a text is not easy and they need support from their friends.

One of the limitations of this study was that it employed a one-group pre-test and post-test design, which is considered rather weak because uncontrolled-for threats to internal validity exist with such a method. Moreover, the subjects of the study consisted of an intact group of 22 engineering students, and this is typically considered a rather small sample size. Therefore, the suggestion for future study is to use both experimental and control groups in order to control the subject characteristics treat to internal validity (Wasanasomsithi, 2004). In addition, in future work the sample should be selected using sampling techniques. Finally, more research should be undertaken in the area of employing the GBA in teaching engineering students how to give oral presentations using different genres, such as progressive reports and projects. Applying the GBA to the teaching of speaking or writing to students from other majors is also suggested.

CONCLUSION

The rationale of this study was to explore an effective teaching method with which to teach English oral presentations to engineering students and to measure the attitude of the students toward the teaching method. The GBA was chosen as a teaching method since it was believed that students can present well if they understand the structure of a presentation and the language that should be used in each part of it.

Previous studies have revealed that teaching using the GBA can help students see the structure of presentations and help them to give presentations effectively. With the GBA, the students were instructed under the concepts of scaffolding, explicit teaching, and genre analysis. The results of this study also confirm the results of previous studies since the GBA was able to improve the presentation ability of the engineering students. In addition, the students stated that they preferred this teaching approach because with it they were able to improve their presentation ability and obtain more confidence, and they felt comfortable when they studied.

REFERENCES

Atai, M. R., & Khatibi, M. B. (2010). The effect of genre consciousness-raising tasks on Iranian EFL learners' listening comprehension performance. *The Journal of Asia TEFL, 7*(3), 121-138.

Bhatia, V. (1993). *Analysing genre*. New York, NY: Longman.

Bhatia, V. (2004). *Worlds of written discourse continuum*. New York, NY: Bloomsbury Publishing.

Bruner, J. (1990). *Acts of meaning*. Cambridge, England: Harvard University Press.

Chaisiri, T. (2010). An investigation of the teaching of writing with a specific focus on the concept of genre. *The International Journal of Learning, 17*(2), 195-205.

Changpueng, P. (2009). *The development of an English writing course based on the genre-based approach for undergraduate engineering students at King Mongkut's University of Technology North Bangkok* (Unpublished

doctoral dissertation). Chulalongkorn University, Bangkok, Thailand.

Changpueng, P. (2012). *The study of engineering students' English presentation ability at KMUTNB*. Unpublished manuscript. King Mongkut's University of Technology North Bangkok, Bangkok, Thailand.

Changpueng, P. (2013). The effects of the Genre-Based approach on engineering students' writing ability. *Journal of Social Sciences & Humanities*, *21*(2), 735-756.

Cheng, A. (2006). Understanding learners and learning in ESP genre-based writing instruction. *English for Specific Purpose, 25*, 76-89.

Douglas, D. (2002). *Assessing Language for Specific for Purposes*. UK: Cambridge University Press.

Dudley-Evans, T., & St. John, M. (1998). *Developments in English for specific purposes*. UK: Cambridge University Press.

Emilia, E. (2005). *A critical genre-based approach to teaching academic writing in a tertiary EFL context in Indonesia* (Unpublished doctoral dissertation). University of Melbourne, Melbourne, Australia.

Feez, S., & Joyce, H. (2002). *Text-based syllabus design*. Sydney, Australia: Mcquarie University/ AMES.

Firkins, A., Forey, G., & Sengupta, S. (2007). Teaching writing to low proficiency EFL students. ELT Journal, *61*(4), 341-352.

Foley, J. (2011). *Grammar meaning and discourse*. Bangkok, Thailand: Assumption University Press.

Fraenkel, J. R., & Wallen, N. E. (2006). *How to design and evaluate research in education*. New York, NY: McGraw Hill.

Gibbons, P. (2002). Scaffolding *language scaffolding learning: Teaching second language learners in the mainstream classroom*. (Vol. 428). Portsmouth, NH: Heinemann.

Hammond, J., & Derewianka, B. (2002). Genre. In R. Carter (Ed.), *Teaching English to speakers of other languages* (pp.186-193). Cambridge, United Kingdom: Cambridge University Press.

Hammond, J., Burns, A., Joyce, H., Brosnan, D., & Gerot, L. (1992). *English for social purposes: A handbook for teachers of adult literacy*. Sydney, Australia: NCELTER.

Hart-Rawung, P., & Li, L. (2008). Globalization and business communication: English communication skills for Thai automotive engineers. *World Academy of Science, Engineering, and Technology*, *24*, 320-330.

Henry, A., & Roseberry, R. (1998). An evaluation of a genre-based approach to the teaching of EAP/ESP writing. *TESOL Quartery, 32*, 147-156.

Henry, A., & Roseberry, R. (2001). A narrow-angled corpus analysis of moves and strategies of the genre: Letter of application. *English for Specific Purposes, 20*, 153-167.

Hovane, M. (2009). Teaching presentation skills for communicative purposes. *Institute of Foreign Language Education and Research Kansai University,* 8, 35-49. Retrieved June 15, 2016, from https://kuir.jm.kansai-u.ac.jp/dspace/bitstream/10112/835/1/KU-1100-20090331-04.pdf

Hyland, K. (2003). *Second language writing*. USA: Cambridge University Press.

Hyland, K. (2007). *Genre and second language writing*. USA: University of Michigan Press.

Hyon, S. (1996). Genre in three traditions: Implications for ESL. *TESOL Quarterly*, *30*, 693-721.

Jarupan, S. (2013). The English oral communication competency of Thai engineering students. *International Journal of Scientific and Research Publications*, *3*(3), 1-9.

Johns, A. M. (2003). Genre and ESL/EFL composition instruction. *Exploring the dynamics of second language writing*, 195-217. Cambridge, UK: Cambridge University Press.

Kassim, H., & Ali, F. (2010). English communicative events and skills needed at the workplace: Feedback from the industry. *English for Specific Purposes*, *29*, 168-182.

Kay, H., & Dudley-Evans, T. (1998). Genre: What teachers think. *ELT Journal, 52*, 308-313.

Khatibi, M. B. (2014). The effect of genre-based teaching on EFL learners' speaking performance. *Research in English language pedagogy, 2*(1), 38-52.

King, J. (2002). Preparing EFL learners for oral presentations. *Dong Hwa Journal of Humanistic Studies*, *4*, 401-418.

Kongpetch, S. (2006). Using a genre-based approach to teaching writing to Thai students: A case study. *Prospect, 21*, 3-33.

Mace, K. (1994). Vygotsky's social development theory. In B. Hoffman (Ed.), *Encyclopedia of education technology*. Retrieved March 14, 2017, from http://www.etc.edu.cn/www/eet/eet/articles/sdtheory/start.htm

Martin, J. R. (2001). Language, register and genre. In A. Burns & C. Coffin (Eds.), *Analysing English in a global context* (pp. 149-166). London, England: Routledge.

Miller, C. (1994). Genre as social action. In A. Freedman & P. Medway (Eds.), *Genre and the new rhetoric* (pp. 23-42). London, England: Taylor and Francis.

Ministry of Education. (2008). *Basic education core curriculum B.E. 2551 (A.D. 2008)*. Bangkok, Thailand: Thailand Government Printing.

Miyata, P. (2003). *Genre-based teaching for promotion of oral presentation ability and self-confidence of undergraduate students* (Unpublished master degree thesis). Chiang Mai University, Thailand.

Munter, M. & Russell, L. (2002). *Guide to presentations*. Upper Saddle River, N.J.: Prentice Hall.

Nation, I., & Newton, J. (2009). *Teaching ESL/EFL listening and speaking*. New York, NY: Routledge.

Noor, N., Mansor, S., & Atin, J. (2010). *Technical English skills*. Puchong, Selangor, Malaysia: August Publishing.

Paltridge, B. (2004). *Genre and the language learning classroom.* USA: The University of Michigan Press.

Pinto dos Santos, V. B. M. (2002). Genre analysis of business letters of negotiation. *English for Specific Purposes, 21*, 167-199.

Radzuan, N. R., & Kaur, S. (2011). Technical oral presentations in English: Qualitative analysis of Malaysian engineering undergraduates' sources of anxiety. *Procedia -- Social and Behavioral Sciences*, *29*, 1436-1445.

Rajprasit, K., Pratoomrat, P., & Wang, T. (2015). Perceptions and problems of English language and communication abilities: A final check on Thai engineering undergraduates. *English Language Teaching*, *8*(3), 111-120.

Rajprasit, K., Pratoomrat, P., Wang, T., Kulsiri, W., & Hemchua, S. (2014). Use of the English language prior to and during employment: Experiences and needs of Thai novice engineers. *Global Journal of Engineering Education*, *16*(1), 27-33.

Richards, J. (2008). *Teaching listening and speaking: From theory to practice*. Cambridge, England: Cambridge University Press.

Suwa, T., Miyahara, K., & Ishimatsu, J. (2012). Improvement techniques for foreign language technical presentation skills used in undergraduate experiment course. *IERI Procedia*, *1*, 160-165.

Swales, J. (1990). *Genre analysis*. UK: Cambridge University Press.

Tashakkori, A., & Teddlie, C. (1998). Mixed method: Combining qualitative and quantitative approaches. Thousand Oaks, CA: SAGE.

Vygotsky, L. (1978). *Mind in society*. USA: Harvard University Press.

Wang, H. (2005). A pragmatic genre analysis of job application letters. *Sino-US English Teaching, 2*(12), 76-81.

Wasanasomsithi, P. (2004). *Research in English applied linguistics: A course book.* Bangkok, Thailand: Sumon Publishing.

Webster, F. (2002). A genre approach to oral presentations. *The Internet TESL Journal*, 8(7). Retrieved June 15, 2016, from http://iteslj.org/Techniques/Webster-OralPresentations.html

Wiboolsri, Y. (2008). *Measurement and achievement test construction*. Bangkok, Thailand: Chulalongkorn University Press.

Woodrow, L. (2006). Anxiety and speaking English as a second language. *RELC Journal*, *37*, 308-328.

Yakhontova, T. (2002). "Selling" or "telling"? The issue of cultural variation in research genres. In J. Flowerdew (Ed.), *Academic discourse* (pp. 216-232). London, England: Longman.

SOCIAL SCIENCES & HUMANITIES

The Impact of Foreign Direct Investment (FDI) on Stock Market Development in GCC countries

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ABSTRACT

Despite the huge number of studies in relation to the FDI, studies on the nexus between FDI and stock market development in GCC are still limited. This paper investigates the impact of FDI on stock market development in Gulf Cooperation Council countries that have become an important economic trading bloc after inclusion of Saudi Arabia in the G-20, leading to a big increase in stock prices and FDI in recent years. This research utilised data from 2002 to 2015 for all the six GCC countries i.e. Bahrain, Kuwait, Qatar, Saudi Arabia, the United Arab Emirates and Oman. Using four control variables, economic growth, economic size, openness and domestic credit to private sector and utilising the panel unit-root test, panel co-integration analysis and panel error-correction model, the research concludes that foreign direct investment has played a long-term significant role in stock market development in GCC countries. Moreover, the research results on short-term impact concludes that FDI affects stock market development positively but not significantly. From a policy perspective, the research evidence convincingly supports the increasingly growing initiative of GCC governments to attract flow of FDI towards non-oil based sectors to diversify their economies and develop stock markets.

Keywords: Error correction model, foreign direct investment, Gulf Cooperation Council, Johansen Fisher panel co-integration test, stock market development

INTRODUCTION

Foreign direct investment (FDI) plays a substantial role in economic development of emerging countries by contributing in a variety of ways such as transfer of technology, creation of employment opportunities, increase in overall productivity, decrease in dependence on imports and enhancement

of export potential, thus leading to overall increase in economic growth (De Mello, 1999). In the past two decades, increasing volumes of direct investment has been flowing between and into developed countries (Vu & Noy, 2009). In 2015, FDI increased by 40% to USD1.8 trillion, the biggest increase in FDI since the financial crisis of 2008. Also, the FDI of developing countries reached USD765 billion in 2015, increasing by 9% compared with 2014 (United Nations Conference on Trade and Development [UNCTAD], 2016). Therefore, most developing countries try to increase their share of FDI by simplifying investment procedure, granting tax incentives, ushering in economic liberalisation and stabilising the economy. In addition, the financial system has been developed to include the financial market in order to direct foreign investment as this is crucial in the overall development of the economy. The positive response of all previous procedure in attracting FDI must be reflected in the development of the stock market (Adam & Tweneboah, 2009; Yartey, 2008). Therefore, the stock markets are considered a mirror that reflects the health and strength of the economy (Ramady, 2013). Empirical studies prove that institutional and regulatory reform, adequate disclosure and listing requirements and fair trading practices promote foreign direct investment in financial markets, leading to expansion and development of domestic markets. (Yartey, 2008).

There is a huge volume of studies in the literature that investigated the role of FDI on the host economy. Nevertheless, the role of FDI has been debated among researchers as well as between researchers and policymakers . It should also be noted that many researchers such as Djankov and Bernard (1999); Kawai (1994), and Mencinger (2003) have also recorded the negative and null effect of FDI in developing countries. Despite the extensive research regarding foreign direct investment, most of the studies have concentrated on the nexus between FDI and growth of GDP. However, only a limited number of research studies have investigated the direct link between FDI and development of the financial market.

In the last two decades, policymakers in the GCC countries have recognised the importance of increasing FDI to achieve economic growth so as to depart from sole dependency on natural resources. In addition, recent years have witnessed a big increase in stock prices, market capitalisation and trading volumes in GCC countries (Ramady, 2013). Hence, this research attempted to measure the impact of FDI on stock market development for all Gulf Cooperation Council (GCC) countries from the period 2002 to 2015 using panel data techniques. The importance of this research is twofold: Firstly, it provides new and recent evidence of the impact of FDI on stock market development in GCC countries. Secondly, it helps policymakers in directing FDI to contribute to achieving economic objectives and increasing the optimal uses of FDI in GCC economies.

The rest of this paper is ordered in the following way: Part 2 describes the

FDI, stock market and economy of the Gulf Cooperation Council (GCC). Part 3 summarises the literature review, while Part 4 lays down the research methodology, including the data and research model used in the study. Part 5 presents the empirical results and Part section 6 offers the conclusion.

FDI, Stock Market and Economy of Gulf Cooperation Council (GCC)

The Gulf Cooperation Council (GCC) is a political and economic alliance established in May 1981 by six Arab oil-exporting countries i.e. Oman, Saudi Arabia, the United Arab Emirates, Qatar, Kuwait and Bahrain. These countries have the same historical and cultural background and share the same economic characteristics. The GCC countries are considered the wealthiest countries in the world as per capita GDP, their economies are highly reliant on hydrocarbon exports and public expenditure in these countries is mainly financed by oil revenue. GCC countries aspire to reduce the exposure of their economies to oil price changes by diversifying their economies so as not to rely solely on oil revenue (Ramady, 2013). FDI plays an important role in implementing diversification strategies. Under certain circumstances, FDI can bring expertise, technological capacity and skills in addition to capital to economies that are not able to develop certain sectors on their own (Kurtishi-Kastrati, 2013). Empirical studies in relation to FDI have proved that FDI

will be more beneficial in weak diversified economies such as the GCC countries than in highly diversified economies. (Nicet-Chenaf & Rougier, 2008). GCC countries have recognised the importance of this and have adopted new measures aimed at attracting and encouraging foreign direct investment. Policymakers of the GCC countries have provided new incentives in the last two decades to attract FDI to increase economic growth and develop their stock markets. These incentives include the establishment of a regulatory, institutional and legal framework to govern foreign investments. In addition, the GCC increased foreign ownership to 100%, reduced corporate taxes and improved foreign investors' access to local stock markets (Ramady, 2013).

Table 1 summarises FDI in GCC countries in 2005, 2010 and 2016. The GCC countries received a big share from FDI in the Arab world, reaching 64.86% in 2010. The table shows that from 2005 to 2010, Saudi Arabia was the biggest recipient of FDI among the GCC countries amounting to 64.39% in 2010. In 2016, FDI inflows fell to 38.28% compared with previous years. The United Arab Emirates has become the major recipient of FDI among GCC countries, with FDI reaching 46.16%. Overall, the two largest recipients of FDI among GCC countries have been Saudi Arabia and the United Arab Emirates. Over the past decade, GCC countries have sought to benefit greatly from FDI and to develop their financial markets as a policy priority among GCC countries. (Ramady, 2013).

Table1
FDI in GCC countries

Economy	FDI in USD in Each County			FDI in Each Country as Percentage (%) from GCC			FDI in Each Country as Percentage (%) from Arab World		
	2005	2010	2016	2005	2010	2016	2005	2010	2016
United Arab Emirates	10899931926	8796769641	8985705000	38.48	19.37	46.16	38.48	12.57	23.30
Bahrain	1048601306	1557710009.2	2819148893.6	3.70	0.34	1.45%	3.70	0.22	0.73
Kuwait	233904109.6	1304627500	2919587953.3	0.83	2.87	1.50%	0.83	1.86	0.76
Oman	1538361508	1242652796	1680894668	5.43	2.74	8.63%	5.43	1.78%	4.36
Qatar	2500000000	4670329670	7739010989.9	8.83	10.29	3.98	8.83	6.67	2.01
Saudi Arabia	12106749694	29232706667	7452533333	42.74	64.39	38.28	42.74	41.76	19.33
GCC Countries	28327548545	45402857283	19466907790	100.00	100.00	100.00	61.57	64.86	50.48
Arab World	46007410075	70001307553	38562350207	162.41	154.18	198.09	100.00	100.00	100.00

LITERATURE REVIEW

There is a large volume of research that has investigated the influence of FDI on the host economy especially in terms of economic growth. Choe (2003) investigated the impact of FDI on the growth of the gross domestic product (GDP) using the Granger causality test in 80 developed and developing countries in the period from 1971 to 1995. The results showed that FDI led to growth of the GDP. Also, the bidirectional causality relationship between FDI and growth in GDP was documented by Al-Iriani (2007) for Kuwait, Oman, Bahrain, the United Arab Emirates and Saudi Arabia. Similar results on positive influence of FDI on growth of GDP were documented by Faras and Ghali (2009), Umoh et al. (2012) and Szkorupova (2014), while Srinivasan et al. (2011) studied the long- and short-term effects of FDI on growth of GDP in five ASEAN economies using advanced econometric techniques, including causality tests, co-integration and the error correction model. The results proved the existence of short-term causality between FDI and GDP and provided evidence of long-term influence of FDI on the growth of GDP. Also, Sothan (2016) studied the direct influence of FDI on the growth of GDP on long- and short-term periods. He used samples from 21 Asian countries and utilised panel co-integration and the Granger causality analysis to conclude on the existing bidirectional causality relationship between FDI and growth of GDP. In addition, he proved the long-term influence of FDI on the growth of GDP.

The null effect of FDI on growth of GDP has also been documented by many researchers such as Chowdhury and Mavrotas (2006); Manuchehr and Ericsson (2001), and Sarkar (2007). Others such as Djankov and Bernard (1999); Kawai (1994), and Mencinger (2003) have also documented the negative influence of FDI .

Although the literature records considerable investigation into the direct link between FDI and GDP in the host country, a few studies have investigated the direct link between FDI and development of the financial market in developing countries, especially in the Arab world. Adam and Tweneboah (2009) measured the influence of FDI on the development of Ghana's financial market. They used the co-integration technique and the error correction model, and their results confirmed the long-term link between FDI and the development of Ghana's financial market. They concluded that shock to FDI impacted on the development of Ghana's financial market. In a similar study, Al Nasser and Soydemmir (2011) examined the link between FDI and the development of 14 Latin American financial markets from 1978 to 2007. The results showed the existence of a bidirectional link between FDI and development of the financial market, and the researchers concluded that FDI allowed for and enhanced the development of the financial market. In another recent study, Shahbaz et al. (2013) provided evidence of the direct influence of FDI on the development of the Pakistani financial market. Fauzel (2016) studied the

role of FDI in development of the financial market. He used samples from small island countries for the period 1990 to 2013. The study found that FDI had a significant influence on the development of financial markets.

Raza and Jawaid (2014) utilised advanced techniques in econometrics, including the causality test and error correction model to capture the effect of FDI on the development of 18 Asian financial markets from 2000 to 2010. They found that FDI negatively affected long- and short-term market capitalisation, and they concluded that FDI can mislead investors. A similar study by Musa and Ibrahim (2014) utilised advanced techniques in econometrics, including co-integration and the error correction model to measure the influence of FDI on the development of the Nigerian financial market between 1981 and 2010. They concluded that there existed no significant role in the long-run of FDI on the development of the Nigerian financial market. In a similar study, Bayar and Ozturk (2016) studied the link between FDI and development of financial markets in Turkey during the 1974-2015 period. They concluded that there was unidirectional causality between FDI and financial development in Turkey.

In light of these empirical studies, it can be noted that there is mixed evidence on the effect of FDI on the host economy. Moreover, no previous research has studied the direct effect of FDI on stock market development. Therefore, this research fills the gap in the literature by examining the influence of FDI on stock market development in Gulf Cooperation Council countries.

METHODS

Research Data

The research data were collected from the World Bank database for all the six Gulf Cooperation Council (GCC) countries from 2002 to 2015. In order to examine the impact of FDI on stock market development , the research utilised four control variables that have been used widely in the literature: economic growth, economic size, openness and domestic credit to private sector for the GCC countries, which are Oman, Saudi Arabia, the United Arab Emirates, Qatar, Kuwait and Bahrain.

Stock Market Development

There are different measures for stock market development in the literature such as size, market liquidity market concentration and market volatility, to name only three. This research used market capitalisation as a proportion of GDP to measure stock market development in GCC countries because it is less arbitrary than other measures of stock market development (Demirguc-Kunt & Levine, 1996). This measure is equal to market value of shares traded divided by GDP (% of GDP), denoted by ST.

Foreign Direct Investment (FDI)

Foreign direct investment indicates the direct investment equity flows in the reporting economy. It is the sum of equity capital,

reinvestment of earnings and other capital. Most empirical studies related to FDI use the net FDI inflows as a percentage of GDP (% of GDP) to proxy FDI (Alfaro et al., 2004; Azman-Saini et al., 2010; Asongu, 2016.; Bahri et al., 2017).

Economic Growth

Economic growth is defined as the annual percentage growth rate of GDP at market prices based on constant local currency. This measurement is supported by most of the empirical studies such as (Alfaro et al., 2004; Azman-Saini et al., 2010; Bahri et al., 2017; Bongini et al., 2017). This variable is denoted by GROWTH.

Openness

Openness usually refers to a unit of the country's economic policy measurement, also expressed as the trade openness index. Most of the empirical studies proxy openness as a proportion of the sum of exports and imports to GDP (% of GDP) such as Gries et al. (2009) and Yanikkaya (2003). This research used this measurement to estimate openness in GCC countries and denoted the trade openness index as 'openness'.

Domestic Credit to Private Sector

Domestic credit to private sector indicates the financial resources provided to the private sector that establish a claim for repayment. Domestic credit to private sector is measured as proportion of GDP (% of GDP) and denoted by CR. This variable is

widely used in empirical studies (Bahri et al., 2017; Bongini et al., 2017; Nezakati et al., 2011).

Economic Size

This research used the natural logarithm of GDP as proxy of economic size, which is commonly used in the literature. GDP is calculated at purchaser's prices and is equal to the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products (Anwar & Nguyen, 2010; Sothan & Zhang, 2017). This variable is denoted by 'size'.

Research Model

Panel data analysis techniques were utilised to measure the impact of FDI on the development of the financial market; they included the panel unit root test, panel co-integration test and panel error correction model (ECM). The equations below were used for ECM in the long and short term.

Long-Term model:

$$STOCK_t = a_0 + \sum_{j=1}^{p_i} \varphi_1 \ STOCK_{i,t-j}$$

$$+ \sum_{j=1}^{p_i} \varphi_2 \ FDI_{i,t-j} \ +$$

$$\sum_{j=1}^{p_i} \varphi_3 \ GROWTH_{i,t-j}$$

$$\sum_{j=1}^{p_i} \varphi_4 \ OPENNESS_{i,t-j} \ +$$

$$+ \sum_{j=1}^{p_i} \varphi_5 \ SIZE_{i,t-j} +$$

$$\sum_{j=1}^{p_i} \varphi_6 \ CR_{i,t-j} \ + \varepsilon_{i,t}$$

Short-term model:

$$\Delta STOCK_t = a_0 + \sum_{j=1}^{p_i} \beta_1 \Delta \, STOCK_{i,t-j}$$
$$+ \sum_{j=1}^{p_i} \beta_2 \Delta \, FDI_{i,t-j} +$$
$$\sum_{j=1}^{p_i} \beta_3 \Delta \, GROWTH_{i,t-j}$$
$$\sum_{j=1}^{p_i} \beta_4 \Delta \, OPENNESS_{i,t-j}$$
$$+ \sum_{j=1}^{p_i} \beta_5 \Delta \, SIZE_{i,t-j} +$$
$$\sum_{j=1}^{p_i} \beta_6 \Delta \, CR_{\,i,t-j} +$$
$$\lambda_1 ECT_{i,t-j} + \varepsilon_{i,t}$$

φ_i represents the coefficients in the long term for the research variables, while β_i represent sthe coefficients in the short term, where, $i=1,\ldots$ and N represents the cross-sectional panel members for the period t , while p_i is the length of the lag. **ECT** is the error correction term lagged by one period obtained from the long-term equation. It represents the adjustment coefficient and must be significant, negative and less than one to prove a long-term relationship. ε_t is the serially uncorrelated disturbance with a zero mean and constant variance.

RESULTS

Descriptive Statistics

Table 2 displays the descriptive statistics of FDI in the GCC countries, including central tendency, dispersion and the normality test. The table indicates that Bahrain attracted the highest FDI, while Oman attracted the least. The results of the Jarque-Bera test indicates acceptance of the null hypothesis of normality, except for Bahrain. Therefore, we can conclude that almost all the times series for FDI in the GCC countries used normal distribution.

Table 2

Descriptive statistics of foreign direct investment in Gulf countries

	Mean	Max.	Min.	Std. Dev.	Skew	Kurt	Jarque-Bera	Prob.
Bahrain	0.049249	0.157506	0.006058	0.0402	1.5003	5.0085	7.0627	0.0292
Kuwait	0.005754	0.021159	-0.0014	0.0071	0.9511	2.6541	2.0247	0.3633
Oman	0.026167	0.079175	0.001154	0.0231	0.9115	2.9735	1.8007	0.4064
Qatar	0.031225	0.083076	-0.00416	0.0262	0.3332	2.1478	0.6827	0.7108
Arab Saudi	0.030652	0.084964	-0.00326	0.0295	0.5058	1.9579	1.2305	0.5404
United Arab Emirates	0.032525	0.067672	0.000868	0.0214	0.2702	1.9169	0.7935	0.6724

Unit Root Test

Investigating a long-term relationship requires integration of all equation variables in the same order. Table 3 and Table 4 represent the findings of the Augmented Dickey-Fuller Test and the Phillips-Perron Test at level and first difference. The results indicate rejection of the unit root null hypothesis at the first difference for all the variables, confirming that all the times series of researched variables were integrated at the first order.

Table 3
Estimation of Panel Unit Root Test (ADF-Fisher)

	At level	At the first difference
	ADF-Fisher Chi-Square	ADF-Fisher Chi-Square
ST	17.0811	32.1710***
FDI	15.7817	43.3986***
GROWTH	20.4261	67.0271***
OPENNESS	4.68334	44.7107***
SIZE	0.99911	23.6452**
CR	1.36557	20.1349*

*** shows significance at 1% level; ** shows significance at 5; * shows significant at 10 %

Table 4
Estimation of Panel Unit Root Test (Phillips-Perron)

	At level	At the first difference
	PP-Fisher Chi-Square	PP-Fisher Chi-Square
ST	17.6241	61.3060***
FDI	15.7796	75.5243***
GROWTH	18.3049	117.274***
OPENNESS	3.33912	53.5031***
SIZE	0.20467	37.3040***
CR	0.94325	31.5916***

*** shows significance at 1% level; ** shows significance at 5; * shows significant at 10 %

Multicollinearity Test

Before proceeding to the co-integration test and the error correction model, we applied the tolerance and the Variance Inflation Factor (VIF) to check for the existence of multicollinearity in the estimated model. The results of the tolerance test showed that all the independent variables had a low tolerance value, indicating that all the variables under consideration were almost the perfect combination of the other independent variables in the estimated model. The table shows that the value of the VIF for all the independent variables was less than 10, indicating no collinearity among the independent variables in the estimated model.

Table 5
Results of Multicollinearity Test

	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
FDI	0.76	1.316
GROWTH	0.896	1.116
OPENNESS	0.574	1.743
SIZE	0.923	1.083
CR	0.586	1.708

Co-Integration Test

This paper uses the Johansen co-integration test to discover existence of a long-term link between FDI and financial market development in GCC countries.

The results of the Johansen test based on a trace test and maximum Eigenvalue test are listed in Table 6. The results of the trace test and the maximum Eigen test indicated rejection at a 5% significant level;

according to the null hypothesis of Johansen Fisher Panel Co-integration, there is no co-integration. Moreover, the findings of the Johansen Co-Integration test concludeed that there was only one co-integration relationship between the variables. This indicates existence of a long-term link between FDI and development financial market in GCC countries.

Table 6
Estimation of Panel Co-Integration (Johansen Test)

Hypothesised No. of CE(s)	Eigenvalue	Trace Statistic	Max-Eigen Statistic
None *	0.532473	109.4889**	40.29579**
At most 1	0.437423	69.19308	30.48708
At most 2	0.345237	38.70600	22.44454
At most 3	0.205579	16.26146	12.19754
At most 4	0.070223	4.063927	3.858934
At most 5	0.003860	0.204993	0.204993

*** shows significance at 1% level; ** shows significance at 5%

Error Correction Model

This research used the error correction model to capture the influence of FDI and control variables on financial market development. The results of two equations, the long-run equation and short-run equation, are provided in the table below.

As noted in the table, the long-term elasticity of financial stock market development to FDI was positive for the period studied and statistically significant at 1%. The long-term elasticity of financial market development to economic growth

and domestic credit to private sector was positive and significant at 1%. On the other hand, the long-term elasticity of the financial market development to openness and economic size were negative and significant at 1%. The results of the short-term equation showed that the short-term elasticity of stock market development to FDI was positive but not statistically significant. Likewise, short-term elasticity of stock market development to openness, economic size and domestic credit to private sector was not statistically significant, while the short-term elasticity of financial

market development to economic growth was positive and statistically significant at 1%. The results also showed that the value of error correction confirmed the long-term link between the independent variables and FDI.

Table 7
Estimation of Error Correction Model

Co-Integrating Equation		Error Correction	
ST(-1)	1.000000	CointEq1	-0.100394**
FDI(-1)	0.242105***	D(ST(-1))	0.390672***
GROWTH(-1)	0.187355***	D(FDI(-1))	0.007723
OPENNESS(-1)	-0.021180**	D(GROWTH(-1))	0.033737**
SIZE(-1)	-0.452683***	D(OPENNESS(-1))	-0.005155
CR(-1)	0.058305***	D(SIZE(-1))	0.640161
C	8.561646	D(CR(-1))	0.019104
		C	-0.085872
		R-squared	0.301297
		Adj. R-squared	0.192609
		F-statistic	2.772145

*** shows significance at 1% level; ** show ssignificance at 5%

Testing for Serial Correlation and Heteroscedasticity

Serial correlation (also called autocorrelation) occurs when the error term for one-time period is associated with the error for the next period. If the serial correlation exists in the model, the estimated coefficients will be biased and inconsistent. In this research, we applied the Lagrange multiplier (LM) test on the residual of error correction model. The null hypothesis of the test was that there was no serial correlation in the residuals up to the specified order. Table 8 shows the results of the Lagrange multiplier (LM), indicating acceptance of the null hypothesis for this test. This means that there was no serial correlation in the estimated model and the estimated coefficients were unbiased.

Table 8
Lagrange Multiplier (LM) Test

Lags	LM-Stat	Prob
1	36.67721	0.4373
2	42.84306	0.2011
3	24.19347	0.9333
4	33.47364	0.5893
5	25.96944	0.8913
6	29.64735	0.7636
7	24.70295	0.9226
8	29.94847	0.7510
9	26.39573	0.8793
10	47.07337	0.1024
11	41.60841	0.2397
12	42.78475	0.2028

Null hypothesis: No serial correlation at lag order h

Heteroscedasticity occurs when variance of the error term differs across values of an independent variable. The table shows the results of the White heteroscedasticity test on the residual of error correction model. The results of the joint test and individual components in Table 9 indicate acceptance of the null of the heteroscedasticity test that says that there is no heteroscedasticity in the residual of the error correction model. This means that variance of the error term in the estimated error correction model does not differ across the value of independent variables, indicating that the estimated coefficients in the error correction model were unbiased, efficient and consistent.

Table 9
Heteroskedasticity Test

Joint Test:					
Chi-Sq	df	Prob.			
319.7379	294	0.1447			
Individual Components:					
Dependent	R-Squared	F(14,38)	Prob.	Chi-Sq(14)	Prob.
res1*res1	0.262044	0.963828	0.5055	13.88833	0.4581
res2*res2	0.120844	0.373090	0.9749	6.404715	0.9552
res3*res3	0.274544	1.027203	0.4488	14.55083	0.4095
res4*res4	0.200281	0.679764	0.7789	10.61490	0.7160
res5*res5	0.474076	2.446699	0.0144	25.12603	0.0333
res6*res6	0.248188	0.896039	0.5695	13.15396	0.5144
res2*res1	0.376677	1.640257	0.1123	19.96389	0.1313
res3*res1	0.202156	0.687739	0.7716	10.71426	0.7083
res3*res2	0.209884	0.721014	0.7403	11.12385	0.6763
res4*res1	0.259082	0.949123	0.5191	13.73134	0.4699
res4*res2	0.116905	0.359321	0.9787	6.195985	0.9613
res4*res3	0.123022	0.380760	0.9725	6.520189	0.9516
res5*res1	0.267095	0.989178	0.4824	14.15606	0.4382
res5*res2	0.202974	0.691232	0.7684	10.75763	0.7050
res5*res3	0.206026	0.704321	0.7561	10.91936	0.6924
res5*res4	0.321246	1.284638	0.2613	17.02604	0.2548
res6*res1	0.291308	1.115707	0.3762	15.43932	0.3488
res6*res2	0.607121	4.194419	0.0002	32.17741	0.0038
res6*res3	0.377430	1.645524	0.1109	20.00381	0.1300
res6*res4	0.290044	1.108890	0.3815	15.37234	0.3532
res6*res5	0.228654	0.804608	0.6590	12.11864	0.5968

CONCLUSION

This study empirically examined the impact of FDI on stock market development in GCC countries from 2002 to 2015. Using panel analysis techniques including the panel unit-root test, Johansen panel co-integration test and panel error-correction model, we provided evidence that FDI has statistically significant positive effect on stock market development in the long run, meaning that FDI has contributed in a substantial role in developing the stock markets in the long term in GCC countries. This result is consistent with the new tendency of GCC governments to encourage FDI and increase its role in developing the economy. On the other hand, this result is also consistent with many empirical studies such as Shahbaz et al. (2013) and Adam and Tweneboah (2009). The results showed that in the short term, FDI has a positive effect on stock market development but this impact is not statistically significant. These results have important implications that policymakers in GCC countries can take note of. The results indicate that policymakers in these countries should liberalise the hydrocarbon sector and integrate it to their economies to benefit from the inflows of FDI to this sector and help in further developing their stock markets.

This research confirms that both the economic growth and domestic credit to the private sector have a positively significant effect in the long term on stock market development but a significant effect only on short-term economic growth. These results suggest that GCC countries must adopt new policies to strengthen the relationship between domestic investors and the stock market by improving the laws, regulations and supervision of stock markets. Domestic institutional investors also must be promoted to develop the stock markets in the GCC countries.

On the other hand, the research results show that openness and economic size have a negative long-term impact on stock market development. This result is consistent with the tendency of big economies in the GCC to support and encourage medium- and small-sized enterprises (SMEs), resulting in increase to the GDP. However, investment in SMEs is not reflected in the stock market.

These results have two important policy implications. The first is that policymakers in GCC countries must be selective in attracting FDI; they must attract FDI to non-oil sectors to achieve their objectives in diversifying their economies away from oil revenues. However, policymakers in GCC countries must liberalise the hydrocarbon sector and integrate it to their economies to benefit from the inflows of FDI to this sector. The second is that GCC countries have large domestic financial resources that must be directed to finance medium- and small-sized enterprises (SMEs).

REFERENCES

Adam, A. M., & Tweneboah. G. (2009). Foreign direct investment and stock market development: Ghana's evidence. *International Research Journal of Finance and Economics, 26,* 178–185. Retrieved June 15, 2016, from https://ssrn.com/abstract=1289843

Alfaro, L., Chanda, A., Kalemli-Ozcan, & S., Sayek, S. (2004). FDI and economic growth: The role of local financial markets. *Journal of International Economics, 64*(1), 89–112. doi:10.1016/S0022-1996(03)00081-3

Al-Iriani, M. (2007). Foreign direct investment and economic growth in the GCC countries: A causality investigation using heterogeneous panel analysis. *Topics in Middle Eastern and North African Economies, 9*(1), 1–31.

Al Nasser, O. M., & Soydemir, G. (2010). Domestic and international determinants of foreign direct investment in Latin America. *Journal of Emerging Markets, 16*(2), 7-14.

Anwar, S., & Nguyen, L. P. (2010). Foreign direct investment and economic growth in Vietnam. *Asia Pacific Business Review, 16*(1-2), 183-202. doi: 10.1080/10438590802511031.

Asongu, S. A. (2016). Determinants of growth in fast-developing countries: Evidence from bundling and unbundling institutions. *Politics & Policy, 44*(1), 97–134.

Azman-Saini, W. N. W., Baharumshah, A. Z., & Law, S. H. (2010). Foreign direct investment, economic freedom and economic growth: International evidence. *Economic Modelling, 27*(5), 1079–1089.

Bahri, E. N. A., Nor, A. H. S. M. Nor, N. H. H. M., & Sarmidi, T. (2017). Foreign direct investment, financial development and economic growth: A panel data analysis. *Jurnal Pengurusan, 51,* 1–22. Retrieved June 15, 2017, from http://ejournals.ukm.my/pengurusan/article/view/22776/7266.

Bayar, Y., & Ozturk, O. F. (2016). Interaction between financial development and foreign direct investment inflows in Turkey. *Scientific Cooperation for the Future in the Social Sciences, 22-23,* 35–42.

Bongini, P., Iwanicz-Drozdowska, M., Smaga, P., & Witkowski, B.(2017). Financial development and economic growth: The role of foreign-owned banks in CESEE countries. *Sustainability, 9*(3), 335. doi:10.3390/su9030335.

Choe, I. J. (2003). Do foreign direct investment and gross domestic investment promote economic growth? *Review of Development Economics, 7*(1), 44–57. DOI: 10.1111/1467-9361.00174

Chowdhury, A., & Mavrotas, G. (2006). FDI and growth: What causes what? *World Economy, 29*(1), 9–19.

De Mello, L. R. (1999). Foreign direct investment-led growth: Evidence from time series and panel data. *Oxford Economic Papers, 51*(1), 133–151. Retrieved June 15, 2017, from https://pdfs.semanticscholar.org/5735/344e48c5c3698062b2023723fa2d092bfdc.pdf

Demirguc-Kunt, A., & Levine, R. (1996). Stock market development and financial intermediaries: Stylized facts. *World Bank Economic Review, 10*(2), 291–321.

Djankov, S., & H. Bernard. (1999). Foreign investment and productivity growth in Czech enterprises. *World Bank Economic Review, 14*, 49–64. Retrieved June 15, 2017, from http://documents.worldbank.org/curated/en/338911468246582717/Foreign-investment-and-productivity-growth-in-Czech-enterprises

Faras, R. Y., & Ghali, K. H. (2009). Foreign direct investment and economic growth: The case of the GCC countries. *International Research Journal of Finance and Economics, 29,* 134–145.

Fauzel, S. (2016). Modeling the relationship between FDI and financial development in small island economies: A PVAR approach. *Theoretical Economics Letters*, *6,* 367–375. doi: 10.4236/tel.2016.63041

Gries, T., Kraft, M., & Meierrieks, D. (2009). Linkages between financial deepening, trade openness and economic development: Causality evidence from Sub-Saharan Africa. *World Development, 37*(12), 1849–1860.

Kawai, H. (1994). International comparative analysis of economic growth: Trade liberalization and productivity. *The Developing Economies*, *17,* 373–97.

Kurtishi-Kastrati, S. (2013). The effects of foreign direct investments for host country's economy. *European Journal of Interdisciplinary Studies, 5*(1), 26–38. Retrieved June 15, 2017, from http://www.ejist.ro/files/pdf/369.pdf

Manuchehr, I., & Ericsson, J. (2001). On the causality between foreign direct investment and output: A comparative study. *The International Trade Journal*, *15*(1), 1–26, doi: 10.1080/088539001300005431.

Mencinger, J. (2003). Does foreign direct investment always enhance economic growth. *Kyklos, 56*(4), 491–508. doi: 10.1046/j.0023-5962.2003.00235.x

Musa, S. U., & Ibrahim. M. (2014). Stock market development, foreign direct investment and macroeconomic stability: Evidence from Nigeria. *Research Journal of Finance and Accounting, 5*(18), 258-264. Retrieved June 15, 2017, from http://iiste.org/Journals/index.php/RJFA/article/view/16229

Nezakati, H., Fakhreddin, F., & Vaighan, B. M. (2011). Do local banks credits to private sector and domestic direct investments affect FDI inflow? (Malaysia evidence). *World Applied Sciences Journal, 15*(11), 1576–1583. Retrieved June 15, 2016, from https://pdfs.semanticscholar.org/ab83/54378c79dfd22dd34b32784c1f2a851b1478.pdf

Nicet-Chenaf, D., & Rougier, E. (2008). FDI, diversification and growth: An empirical

assessment for MENA countries. Bordeaux University. Retrieved June 15, 2016, from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.542.1620&rep=rep1&type=pdf

Ramady, M. A. (2013). *Political, economic and financial country risk*. New York, NY: Springer.

Raza, S. A., & Jawaid, S. T. (2014). Foreign capital inflows, economic growth and stock market capitalization in Asian countries: An ARDL bound testing approach. *Quality & Quantity, 48*(1), 375–385. Doi: 10.1007/s11135-012-9774-4.

Sarkar, P. (2007). Does foreign direct investment promote growth? Panel data and time series evidence from less developed countries, 1970-2002. *Munich Personal RePEc Archive*, *6*(5176), 1–23. Retrieved June 15, 2017, from http://mpra.ub.uni-muenchen.de/5176/

Shahbaz, M., Lean, H. H., & Kalim, R. (2013). The impact of foreign direct investment on stock market development: Evidence from Pakistan. *Journal Economic Research, 26*(1), 17–32. doi: 10.1080/1331677X.2013.11517588

Sothan, S. (2016). Foreign direct investment, exports, and long-run economic growth in Asia: Panel cointegration and causality analysis. *International Journal of Economics and Finance, 8*(1), 26–37. doi:10.5539/ijef.v8n1p26

Sothan, S., & Zhang, X. (2017). Causality between foreign direct investment and economic growth for Cambodia. *Cogent Economics & Finance, 5*(1), 1-13. Retrieved June 15, 2017 from https://doi.org/10.1080/23322039.2016.1277860

Srinivasan, P., Kalaivani, M., & Ibrahim, P. (2010). FDI and economic growth in the ASEAN countries: Evidence from cointegration approach and causality test. *The IUP Journal of Management Research, 9*(1), 38–63. Retrieved June 15, 2017, from https://ssrn.com/abstract=1535725

Szkorupova, Z. (2014). A causal relationship between foreign direct investment, economic growth and export for Slovakia. *Procedia Economics and Finance, 15,* 123–128. doi: 10.1016/S2212-5671(14)00458-4

Umoh, O., Jacob, A., & Chuku, C. (2012). Foreign direct investment and economic growth in Nigeria: An analysis of the endogenous effects. *Current Research Journal of Economic Theory, 4*(3), 53–66. Retrieved June 15, 2017, from http://maxwellsci.com/print/crjet/v4-53-66.pdf

United Nations Conference on Trade and Development. (2016). *World Investment Report 2016.* Herndon, VA, USA: United Nations Publication. Retrieved June 15, 2017, from http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=1555

Vu, B. T., & Noy, I. (2009). Sectorial analysis of foreign direct investment and growth in the developed countries. *Journal of International Financial Markets, Institutions & Money, 19,* 402–413. doi: 10.1016/j.intfin.2008.04.002

Yanikkya, H. (2003). Trade openness and economic growth: A cross country empirical investigation. *Journal of Development Economies, 72,* 57–89.

Yartey, C. A. (2008). The determinants of stock market development in emerging economies: Is South Africa different? *IMF Working Paper 08/38.* Washington DC, USA: International Monetary Fund. Retrieved from https://www.imf.org/en/Publications/WP/Issues/2016/12/31/The-Determinants-of-Stock-Market-Development-in-Emerging-Economies-Is-South-Africa-Different-21646

Physiological and Psychological Health Benefits of Urban Green Space in Kuala Lumpur: A comparison between Taman Botani Perdana and Jalan Bukit Bintang

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ABSTRACT

This study explores physiological and psychological effects of urban green space by using measurements and self-reported psychological responses to an urban park compared to a city environment. Participants of this study were 20 homogenous male students. Taman Botani Perdana, an urban park in Kuala Lumpur, and Jalan Bukit Bintang, a commercial district in the city centre were chosen as the study areas for this study. On the first day, the participants went to Taman Botani Perdana, and to Jalan Bukit Bintang on the second day. In both areas, the participants were instructed to walk along a given route for 20 minutes. Saliva samples were collected before and after walking in both areas along with blood pressure measurements. Self-reported physiological responses were measured before and after each walking session. Results indicated that salivary cortisol concentration significantly increased in the city, whereas no significant change was found in the urban park. Diastolic blood pressure significantly reduced after walking in the urban park. In terms of psychological responses, Total Mood Disturbance among the participants were significantly lower when they were in the urban park compared to the city. Meanwhile, the Positive and Negative Affect Schedule (PANAS) showed that positive effect significantly increased after walking in the urban park, whereas the participants' positive effects significantly reduced after walking in the city. These results indicate that urban green space has positive benefits physiologically and psychologically compared to urban environment.

Keywords: Urban green space, restorative environments, salivary cortisol, scientific evidence, stress

INTRODUCTION

Urban green space is defined as all publicly owned and publicly accessible open space with a high degree of cover by vegetation such as parks, woodlands, nature areas and other green spaces (Schipperijn et al., 2010). Urban green space is often considered as essential for urban dwellers because the benefits provided by them are extensive. Green spaces within urban settings are believed to be experiencing pressures and threats as a result of urban growth. Therefore, there is a prevalent concern that urban sprawl and rapid expansion of cities occurring all over the globe can isolate urban dwellers from direct contact with nature (Willson, 1984). These concerns are more dominant in developing countries where cities lack proper development planning especially in terms of landscapes. The United Nations (UN) has estimated that more than 50% of the world's population are already living in urban areas and this percentage is forecasted to rise rapidly over the coming years (United Nations, 2014). This leads to more expansion of cities to provide housing, employment opportunities, roads and other infrastructures that may further degrade the natural environment.

In today's society, people face various pressures from work, noise pollution, and other stressors. This phenomenon drives people to seek for relief and physical activities through outdoor recreation in restorative environments. Urban sprawl has also been directly linked to increment of obesity rates (Ewing et al., 2008). With obesity, risks of other diseases such as cardiovascular diseases, hypertension, diabetes and certain cancers increase many folds (Ramachandran & Snehalatha, 2010). For urbanites, urban green spaces provide the most ready access to restorative environments (Maller et al., 2006). Urban green spaces also act as a platform for people to exercise and be inspired to be more physically active. In an urban environment, the main contribution to the enhancement of quality of life, in terms of perceived health conditions and environmental quality, as well as affective and cognitive attachment to the place of residence, is thus provided by urban green spaces and their availability and accessibility (Conedera et al., 2015).

Willson (1984)'s "biophillia" hypothesis states that humans possess a deep-seated biological need for connections and contact with nature, which can be understood as living systems other than that of human beings. This is where the role of urban green spaces comes into hand. As more areas are given way for urbanisation and development, humans are starting to lose contact with nature. In addition, from the social and political contexts, the roles of urban green spaces, particularly park and recreation settings, have also been related to other goals such as environmental preservation, community and economic development, rather than merely focusing on public health.

The use of urban green spaces is defined in general as any sort of visits to an urban green space, without looking at the duration of stay, motivation of visit or activity done (e.g., passing through on the way to a

destination is also taken as use) (Ewing et al., 2008). Hence, any sort of interaction with an urban green space is considered as use, as the many benefits of an urban green are passive, or in other words, intangible. These passive benefits are of, or closely related to, emotional or psychological responses of people. Chiesura (2004) stated that despite their intangible and immaterial nature, these services (of urban parks) provided clear benefits to people, whose loss can have serious socio-economic consequences.

Existing studies on the restorative effects of urban green spaces have been extensive throughout the years. Studies utilizing objective measurements for stress in relation to natural environments have been on the rise only in the past decade in more developed countries such as in the US (Beil & Hanes, 2013), the EU (Roe et al., 2013; Triguero-mas et al., 2017; Thompson et al., 2012) and Japan (Lee et al., 2011). A study by Lee et al. (2011), compared the response of 12 participants exposed to a forest setting and an urban setting in a 3-day field experiment. Salivary cortisol and pulse rate decreased significantly in the forest setting compared to the urban setting.

Although many researchers have hypothesised that the level of physical activity increases well-being (Mansor et al., 2012; Nor Akmar, 2012), in developing countries such as Malaysia there is no clear indication as to how beneficial physical activity is in urban green spaces based on the objective data as it is lacking. Thus, the gap in this knowledge needs to be addressed to obtain a better understanding of the benefits of urban green spaces, which may be useful in public health and urban green space planning and management. Furthermore, studies on stress levels have always been limited to questionnaires that are either in the form of open-ended questions, or ratings and scales. Meanwhile, experimental tests on stress need to be done in order to provide solid objective data.

MATERIALS AND METHODS

Study Area

Figure 1. A view on Jalan Bukit Bintang (left) and Taman Botani Perdana (right)

The field experiment was done in two different sites to compare the physiological effects of two different environments. The first site, Taman Botani Perdana Kuala Lumpur, is situated near the city centre of Kuala Lumpur, with an approximate distance of 3 kilometres. It is a famous urban park that is frequented by urbanites to spend their leisure time. The second site, Jalan Bukit Bintang, is a typical urban area situated in the heart of Kuala Lumpur. It is a busy and hectic commercial area full of motorised vehicles and tall buildings. Each site was chosen from a range of sites with specific environmental characteristics. Both of the sites chosen were man made however, Taman Botani Perdana has a higher vegetation concentration when compared to the more built environment of Jalan Bukit Bintang. The distance between Universiti Putra Malaysia, which serves as the starting point to both of the sites, were approximately similar.

Subjects

A total of 20 males students were recruited from the Faculty of Forestry, University Putra Malaysia. At the recruitment stage, those who have mental disorder, whether current or past, were screened and excluded. The age range of the participants was set to be 23.1 years old on average. Before conducting the experiment, all of the participants were briefed and thoroughly explained about the objectives of the study and the procedures involved. They were also required to sign a written consent form. The consent form states that all data collected from participants were to be strictly used for research purposes.

Procedure

Before arriving at the study sites, all the participants were briefed and explained once again about the objectives of this study. They were also instructed not to smoke, consume alcoholic beverages and eat prior to the collection of their saliva samples. This was done to ensure that the saliva collected was not affected by other external factors. The study sites were also visited on a weekday and the experiments were conducted at a similar time frame (i.e., 0900 to 1100 hours).

The subjects travelled to both sites via bus, and before initiating the study a short briefing was held. Next, the saliva samples of the participants were collected, this was followed by their blood pressure reading. A questionnaire form, containing Profile of Mood States (POMS) and Positive and Negative Affect Schedule (PANAS), was distributed for the participants to complete. After the data collection, the participants were asked to walk along a predetermined route and take in the surrounding for approximately 20 minutes. At the end of the walk, the participants were asked to rest for 15 minutes so as to mitigate any physiological effects after the physical activity. The participants' saliva samples were collected again, and this was followed by taking their blood pressure reading. The POMS and PANAS test was also done

right after that. In addition, the Restoration Outcome Scale was also given to the participants to respond to. Figure 1 briefly describes the experimental design of this study.
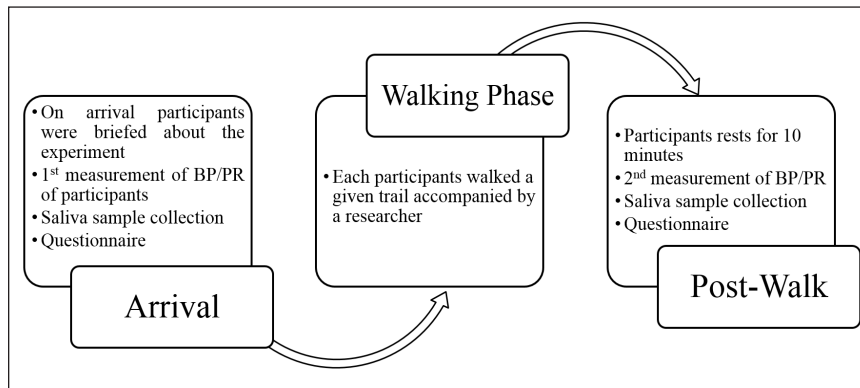
Figure 2. The experimental design

Measurements

The first physiological index measured was salivary cortisol. Salivary cortisol was used in this study as a biomarker for stress. Saliva sampling was done as it is simple and non-invasive unlike venipuncture. The saliva samples were collected and stored in cryo-vial tubes and later analysed by using the ELISA kit in a laboratory. In both the sites, the saliva samples were collected two times; before walking in the environment and after the walk.

The next physiological index measured was blood pressure. Systolic and diastolic blood pressures were measured using a portable blood pressure monitoring device. These data were collected in the same period when the saliva samples were obtained. Before the measurement was done, the equipment was calibrated and checked to minimise errors.

The psychological indices used in this study were the Profile of Mood States (POMS) by et al. (1971), Positive and Negative Affect Schedule Watson et al. (1988) and Restoration McNair Outcome Scale (ROS) by Korpela et al. (2008). All three tests were prepared in Bahasa Malaysia and English to better suit the participants.

Statistical Analysis

The physiological and psychological measurements were used to compare the urban setting and park setting. A total of 20 samples were analysed in this study. A paired t-test was used to analyse the physiological and psychological effects between the urban green space and the city. The statistical differences were considered as significant at $p > 0.05$. In addition, correlation analysis was also used to determine the relationship strength between the variables measured.

RESULTS AND DISCUSSION

Physiological Responses to Both Environments

Based on data presented in Figure 3, in the city setting, salivary cortisol levels showed significant increases in value among the participants compared to before the value of 1.75 ± 1.00 µg/dl and after at 2.33 ± 1.04 µg/dl ($p < 0.05$). In the after period, the participants' cortisol levels showed a significant difference with that of the UGS setting, which is lower than the City (UGS: 0.89 ± 0.55; City: 2.33 ± 1.04; $p < 0.05$). However, no significant differences were found between UGS and City for the before period, as well as between the before and after period in the UGS setting.
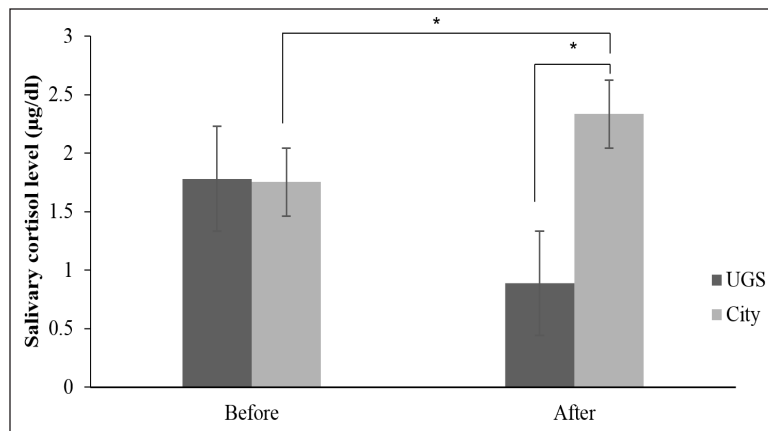
Figure 3. Comparison of the mean values of salivary cortisol levels between urban green space and the city before and after walking. * indicates significance at p<0.05 verified by paired t-test. Values are means ± standard error

Based on data given in Figure 4, blood pressure readings showed a significant decrease in value among the participants in UGS for diastolic pressure (Before: 77.9 ± 5.53; After: 70.5 ± 10.05; $p < 0.05$). Diastolic pressure also showed a significant difference between UGS and City in the after period, with the UGS participants showing lower values than the City (City: 76.6 ± 10.69; $p < 0.05$). Nonetheless, no significant differences were shown in diastolic blood pressure in the before period between the two environments. Similarly, the pulse rates also showed significantly lower value in UGS compared to City among the participants in the after period (UGS: 66.8 ± 10.71; City: 72.4 ± 13.71; $p < 0.05$). Diastolic blood pressure, however, did not show any significant difference in the before period at both UGS and City. Similarly, systolic blood pressure did not show any significance in both the before and after periods in both the environments.
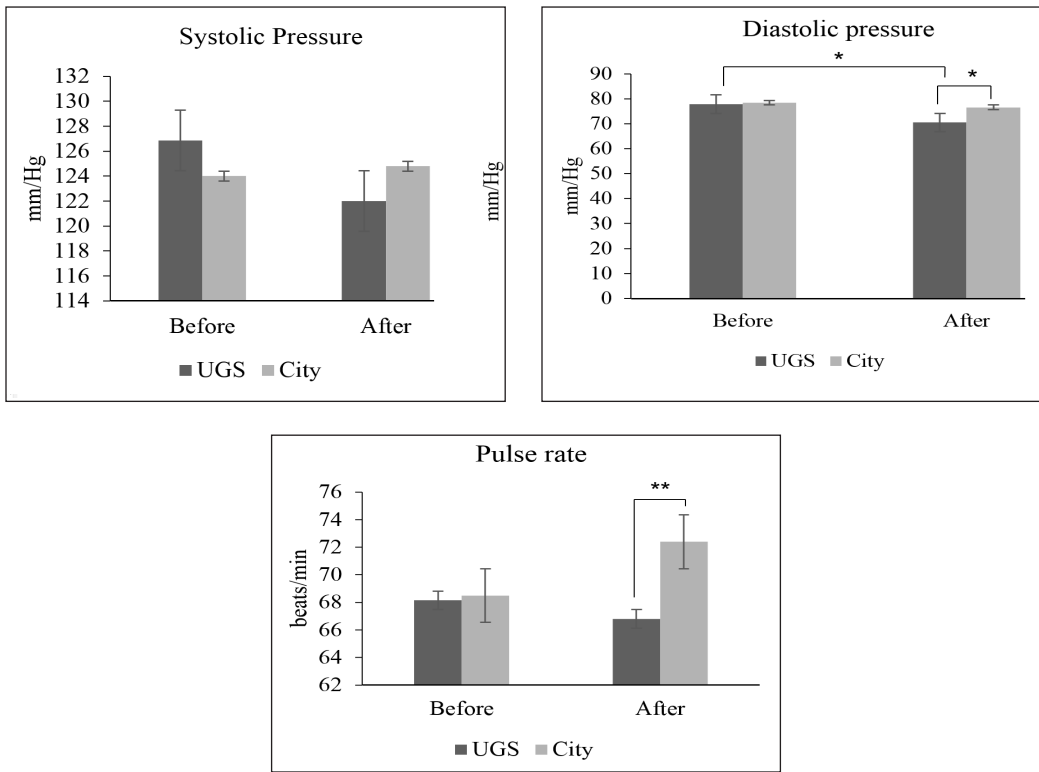
Figure 4. Mean comparison of systolic blood pressure, diastolic blood pressure and pulse rate in both Urban Green Space and City. Bars with (*) indicate significant differences between groups at p 0.05

Psychological Responses to Both Environments

Table 1 shows the Restoration Outcome Scale. The participants in the UGS setting reported a higher score for all the six statements in the scale compared to the score for the City setting. It is important to note that all the six items were highly significant in difference (*p* < 0.001).

Table 1
Descriptive of ROS statements and the p-value comparison between Urban Green Space and City outcomes

Statement	UGS		City		
	M	SD	M	SD	p-value
I feel calmer after being here.	5.65	1.531	2.75	1.376	< 0.001
After visiting this place I feel restored and relaxed.	5.85	1.226	2.65	1.373	< 0.001
I get enthusiasm and energy for my routines from here.	5.5	1.1	2.85	1.021	< 0.001
My concentration and alertness clearly increase here.	5.6	1.095	2.65	1.252	< 0.001
I can forget everyday worries here.	5.7	1.261	2.55	1.191	< 0.001
Visiting here can be a way of clearing and clarifying my thoughts.	5.75	1.410	2.85	1.040	< 0.001

M = mean, SD = standard deviation. Significance at p<0.05

When comparing between UGS and City setting, the data presented in Figure 5 for Profile of Mood states tests indicated significant differences between all the six subscales in the after period – tension (UGS: 2.2 ± 0.97; City: 12.3 ± 2.40; $p < 0.05$), depression (UGS: 2.8 ± 1.10; City: 10.3 ± 2.18; $p < 0.05$), anger (UGS: 2 ± 0.99; City: 10.45 ± 2.27; $p < 0.05$), fatigue (UGS: 4.1 ± 1.13; City: 12.25 ± 1.76; $p < 0.05$), confusion (UGS: 3.35 ± 1.01; City: 8.55 ± 1.64; $p < 0.05$), and vigour (UGS: 23.55 ± 1.43; City: 13.65 ± 1.76; $p < 0.05$). Total Mood Disturbance scores only showed significant difference in the after period

between the UGS and City settings (UGS: - 9.71 ± 5.4; City: 40.2 ± 10.87; $p < 0.05$). In the before period, however, only vigour showed a significant difference between UGS and City (UGS: 20.4 ± 1.54; City: 15.9 ± 1.93; $p < 0.05$). Moreover, tension ($p < 0.05$) and confusion ($p < .05$) decreased significantly in the UGS setting. However, tension ($p < 0.05$), depression ($p < 0.05$), anger ($p < 0.05$), fatigue ($p < 0.05$), and confusion ($p < 0.05$) increased significantly after a walk in the City setting. There were no significant differences between the before and after period for the TMD scores in both settings.
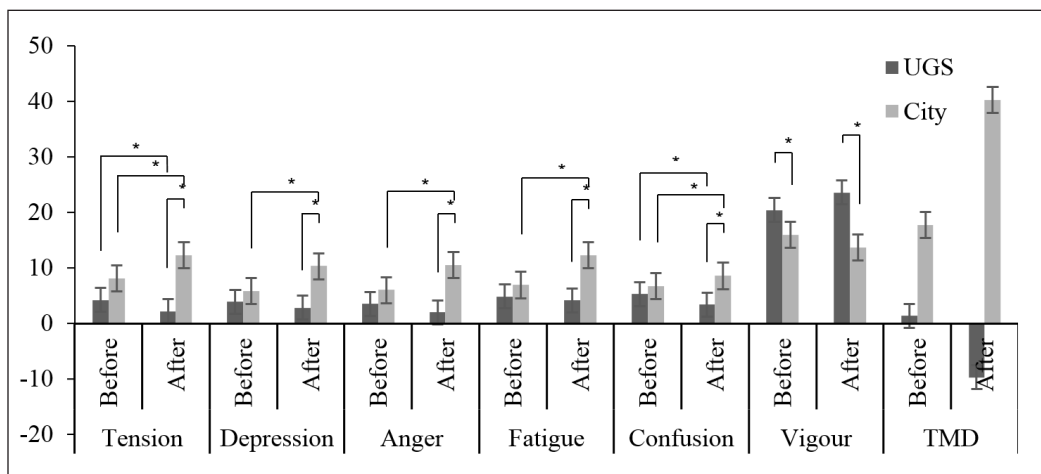
Figure 5. Comparison between the mean values of Profile of Mood States subscales at two measurement periods in both Urban Green Space and City. TMD; Total mood disturbance. (*) indicates significance at p<0.05

The participants, when walking in the UGS setting, showed an increase in positive subscales (Figure 6) – interested (Before: 3.45 ± 0.17; After: 4.10 ± 0.14; $p < .01$), excited (Before: 3.25 ± 0.20; After: 3.75 ± 0.14; $p < 0.05$), strong (Before: 3.00 ± 0.24; After: 3.85 ± 0.17; $p < 0.01$), proud

(Before: 2.75 ± 0.26; After: 3.95 ± 0.18; $p < 0.01$), determined (Before: 2.70 ± 0.22; After: 3.45 ± 0.21; $p < 0.05$), and active (Before: 3.15 ± 0.23; After: 3.95 ± 0.15; $p < 0.01$). In contrast, when walking in the City area, three positive subscales decreased – interested (Before: 3.00 ± 0.26; After: 2.35 ±

0.28; $p < 0.05$), enthusiastic (Before: 3.20 ± 0.22; After: 2.40 ± 0.29; $p < 0.05$), and proud (Before: 3.00 ± 0.26; After: 2.10 ± 0.25; $p < 0.01$). When comparing data for both study areas, only the subscale "interested" during the after period showed a significant difference ($p < 0.01$).
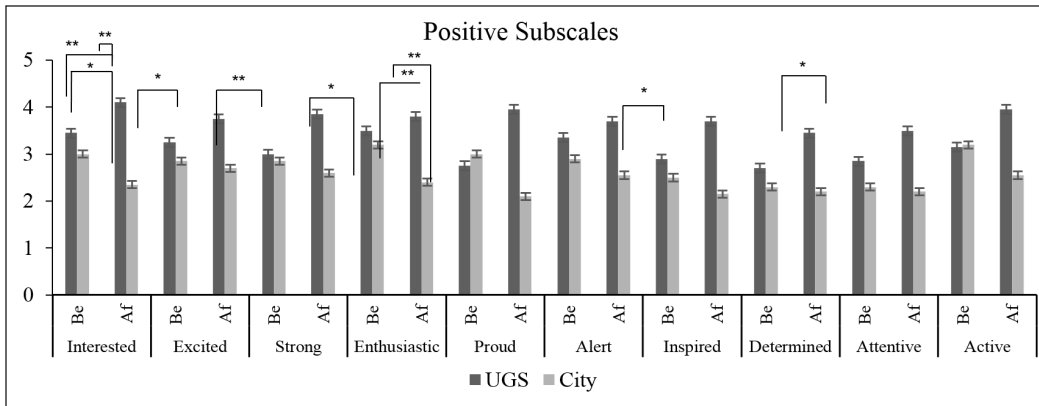
Figure 6. Mean value comparison of positive subscales at two measurement periods in both Urban Green Space and City. Values are mean ± standard error, $n = 20$; ** p<0.01; * p<0.05; significant differences via paired *t*-test

In terms of negative subscales (Figure 7), only the subscale "jittery" decreased significantly after the participants had walked in the UGS setting (Before: 1.7 ± 0.27; After: 1.10 ± 0.07; $p < 0.05$). When comparing both sites, two negative subscales showed a significant difference in the after period – distressed ($p < 0.01$), and irritable ($p < 0.01$). No other subscales showed any significant differences for the before and after periods or between the urban green space and city.
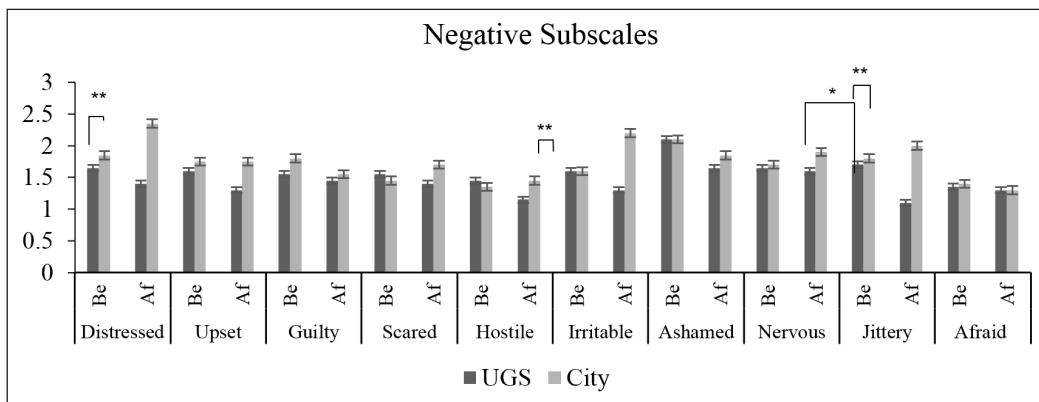
Figure 7. Mean value comparison of negative subscales at two measurement periods in both Urban Green Space and City. Values are mean ± standard error, $n = 20$; ** *p*<0.01; * *p*<0.05; significant differences via paired *t*-test

When summing the scores of the positive and negative subscales (Figure 8), a significant difference can be found at the city setting for both the positive and negative subscales. Positive attitudes decreased (Before: 28.10 ± 1.58; After: 23.80 ± 2.18; $p < 0.05$), while negative attitudes increased (Before: 16.80 ± 1.51; After: 18.05 ± 1.75; $p < 0.05$) after the walk in the City. In the UGS setting, however, only positive attitudes increased (Before: 30.09 ± 1.26; After: 37.75 ± 1.41; $p < 0.01$). There was no significant difference in the negative attitudes after walking in the UGS setting. When comparing both the study sites, only negative attitudes showed a significant difference between before ($p < 0.01$) and after ($p < 0.05$) periods.
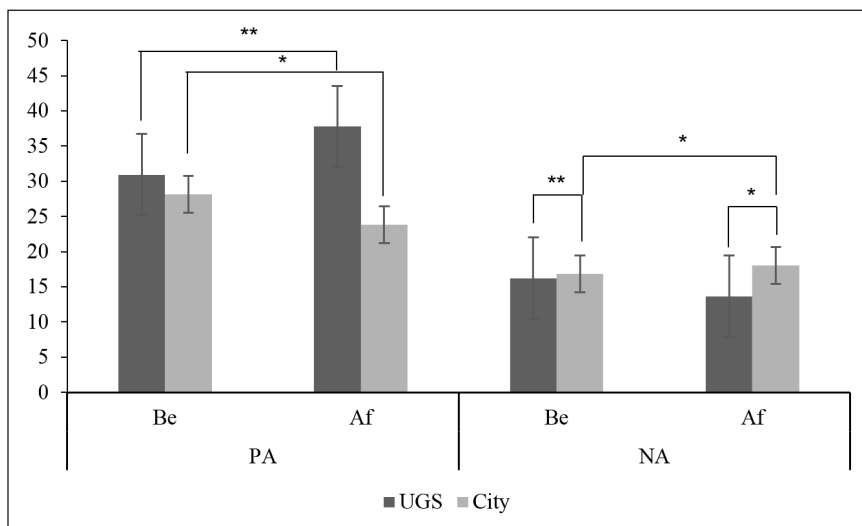
Figure 8. Comparison mean values between positive and negative affect scores in both Urban Green Space and City. Mean ± standard error; $n = 20$; **$p<0.01$; *$p<0.05$; significant differences via paired *t*-test

Even though salivary cortisol changes in UGS did not show any significance in the results of this study, when compared to the City, a significant lower value of cortisol concentration was observed after the walking phase. This is in line with the findings of a study done by Triguero-mas et al. (2017) in Spain which showed lower values of salivary cortisol among participants in green environment when compared to urban environment. Our findings on salivary cortisol changes were not in agreement with a study done by Beil and Hanes (2013) which showed no significant reduction or otherwise in salivary cortisol concentration. A study by Lee et al. (2011) is also not in agreement with our findings as the study done in Japan showed no significant difference in salivary cortisol in the after period. Significantly lower salivary cortisol levels in the UGS compared with the City could be interpreted as the participants feeling relaxed or less stressed in the UGS setting (Lee et al., 2011).

The findings also indicated that walking in the urban green space positively affects users in terms of stress responses. Pulse rate among the participants after walking in the urban green space showed a significant decrease compared to that of the City. This was also observed in the diastolic blood pressure, in which after the walk in the city, the participants were found to have higher pressure readings compared to when they were in the urban green space. The results obtained from the diastolic blood pressure reading corroborates with that of Hartig et al. (2003) which revealed that the subjects who walked in the natural environment had a significant difference in their diastolic blood pressure readings compared to those walking in an urban environment.

Meanwhile, the ROS test clearly showed that the participants felt a higher level of restorative-ness in the urban green space when compared to the city. The second statement of the ROS test "After visiting this place, I feel restored and relaxed" showed the highest mean value among the participants in the urban green space and when compared to the city, a large gap could be seen. This finding suggests that the urban green space gives a sense of relaxation as well as restoration. This is in agreement with a previous study by Tyrväinen et al. (2014) which showed an increased feeling of restoration in green environments and their decrease in a built urban setting.

Furthermore, the POMS test indicates a clear distinction between the restorative effects of UGS and City as the participants' TMD in the UGS is negative, while this is positive TMD for the City. This finding shows that the participants were in a better state of mood in the urban green space as tension and confusion decreased significantly after the walk. A significant difference in the vigour scores could also be seen when comparing both the study areas with the participants showing a higher level of vigour scores for both before and after periods in the UGS. Hence, it is clear that the UGS intensifies the state of positive mood and decreases the intensity of negative mood state. This further suggests that constructed natural environments such as UGS can be beneficial in the emotional aspect of individuals. The findings of the POMS test are partly consistent with the previous studies (Lee et al., 2011; Li et al., 2007).

In summary, positive moods increase in the urban green space setting compared to the city. On the contrary, negative moods decrease in the urban green space when compared to the city. The increase in the positive moods in urban green space is in line with some previous studies (Hartig et al., 2003; Tyrväinen et al., 2014), and this shows that the urban green space has a positive impact on emotions. The findings also indicated the participants felt greater negative emotions in the city after walking.

Limitations of the Study and Recommendations for Future Works

Our research contains several limitations. First, the subjects were only limited to male students. This means the results can only be extrapolated to young male adults of the same age group. Second,

the study areas were only limited to two types of environment (an urban park and a commercial area in the city). Third, due to budget constraints, we could only afford to collect a limited number of saliva samples. This means that a further understanding of how cortisol changes throughout the day among subjects could not be fully ascertained.

With regards to the limitations of our research, it is recommended that future studies have more diverse subjects, which include more age groups and also female respondents. Next, varying the study areas to include other forms of environment such as an urban forest could provide better insights into the effects of urban green space on individuals. Finally, the saliva samples need to be collected throughout the day to further understand how use of urban green space can affect users' stress levels.

CONCLUSION

The results of this study show the possible effects of urban green space in stress reduction and attention restoration. Physiologically, cortisol levels and blood pressure are much more stable in the urban green space when compared to the city. Lower cortisol levels indicated that the participants felt more at ease or relaxed in the urban green space, whereas this resulted in an increase in cortisol level for the city area, indicating that the participants were feeling stressful after walking in that environment.

The higher positive mood and emotions in the urban green space compared to the city indicates the calming psychological effects of urban green space. Total mood disturbance between urban green space and city showed a significant difference in the mean score. In particular, UGS could be seen to reduce the negative emotions but elevate positive emotions, as seen in the PANAS test. This finding is the opposite for the city as negative emotions were shown to have increased among the participants, while their positive emotions decreased.

The support given from the physiological results further gives strong evidence that urban green space plays an important role in individuals' stress and restoration. This is somewhat lacking in the field of study. The urbanites' important access to urban green space is also reinforced by the results of this study. Evidently, being in urban environments increases stress. This justifies the need for proper planning of urban green spaces such as parks in densely populated cities of Malaysia. As urban parks would be the most readily accessible nature area for urbanites, it could be seen as a preventative medicine for chronic stress. The findings of this study can be used as a reference for urban planners to establish urban green spaces in densely populated areas.

However, the results of the study were derived from only 20 young male subjects who are physically and mentally fit. Therefore, the results might not be suitable to be used as a reference for other age groups and gender. Nevertheless, the study results can coin a presumption that urban green space has its own physiological and psychological benefits.

ETHICAL APPROVAL

ACKNOWLEDGEMENTS

REFERENCES

Beil, K., & Hanes, D. (2013). The influence of urban natural and built environments on physiological and psychological measures of stress—A pilot study. *International Journal of Environmental Research and Public Health*, *10*(4), 1250-1267.

Bell, S., Hamilton, V., Montarzino, A., Rothnie, H., Travlou, P., & Alves, S. (2008). *Greenspace and quality of life: A critical literature review*. Research Report by OPENspace for Greenspace Scotland. Stirling: Greenspace Scotland.

Chiesura, A. (2004). The role of urban parks for the sustainable city. *Landscape and Urban Planning*, *68*(1), 129–138.

Conedera, M., Biaggio, A. Del, Seeland K., Moretti, M., & Home, R. (2015). Urban Forestry & Urban Greening Residents' preferences and use of urban and peri-urban green spaces in a Swiss mountainous region of the Southern Alps. *Urban Forestry and Urban Greening*, *14*(1), 139–147.

Ewing, R., Schmid, T., Killingsworth, R., Zlot, A., & Raudenbush, S. (2008). Relationship between urban sprawl and physical activity, obesity, and morbidity. *Urban Ecology: An International Perspective on the Interaction between Humans and Nature*, *18*(1), 567–582.

Hartig, T., Evans, G. W., Jamner, L. D., Davis, D. S., & Gärling, T. (2003). Tracking restoration in natural and urban field settings. *Journal of Environmental Psychology*, *23*(2), 109–123.

Korpela, K. M., Ylén, M., Tyrväinen, L., & Silvennoinen, H. (2008). Determinants of restorative experiences in everyday favorite places. *Health and Place*, *14*(4), 636–652.

Lee, A. C. K., & Maheswaran, R. (2011). The health benefits of urban green spaces: A review of the evidence. *Journal of Public Health*, *33*(2), 212–222.

Li, Q., Morimoto, K., Nakadai, A., Inagaki, H., Katsumata, M., Shimizu, T., …Kawada, T. (2007). Forest bathing enhances human natural killer activity and expression of anti-cancer proteins. *International Journal of Immunopathology and Pharmacology*, *20*(2_Suppl), 3–8.

Maller, C., Townsend, M., Pryor, A., Brown, P., & St Leger, L. (2006). Healthy nature healthy people: "contact with nature" as an upstream health promotion intervention for populations. *Health Promotion International*, *21*(1), 45–54.

Mansor, M., Said, I., & Mohamad, I. (2012). Experiential contacts with green infrastructure's diversity and well-being of urban community. *Procedia-Social and Behavioral Sciences*, *49*, 257-267.

McNair, D. M. (1971). *Manual profile of mood states*. San Diego, California: Educational & Industrial testing service.

Nor Akmar, A. A. (2012). *Green space use and management in Malaysia*. Copenhagen, Denmark: Forest & Landscape, University of Copenhagen.

Pietilä, M., Neuvonen, M., Borodulin, K., Korpela, K., Sievänen, T., & Tyrväinen, L. (2015). Relationships between exposure to urban green spaces, physical activity and self-rated health. *Journal of Outdoor Recreation and Tourism*, *10*, 44-54.

Ramachandran, A., & Snehalatha, C. (2010). Rising burden of obesity in Asia. *Journal of Obesity, 2010,* 1-8. doi:10.1155/2010/868573

Roe, J. J., Thompson, C. W., Aspinall, P. A., Brewer, M. J., Duff, E. I., Miller, D., ... & Clow, A. (2013). Green space and stress: evidence from cortisol measures in deprived urban communities. *International Journal of Environmental Research and Public Health*, *10*(9), 4086-4103.

Schipperijn, J., Stigsdotter, U. K., Randrup, T. B., & Troelsen, J. (2010). Influences on the use of urban green space – A case study in Odense, Denmark. *Urban Forestry and Urban Greening*, *9*(1), 25–32.

Thompson, C. W., Roe, J., Aspinall, P., Mitchell, R., Clow, A., & Miller, D. (2012). More green space is linked to less stress in deprived communities: Evidence from salivary cortisol patterns. *Landscape and urban planning*, *105*(3), 221-229.

Triguero-Mas, M., Gidlow, C. J., Martínez, D., de Bont, J., Carrasco-Turigas, G., Martínez-Íñiguez, T., ... & Jones, M. V. (2017). The effect of randomised exposure to different types of natural outdoor environments compared to exposure to an urban environment on people with indications of psychological distress in Catalonia. *PloS one*, *12*(3), e0172200.

Tyrväinen, L., Ojala, A., Korpela, K., Lanki, T., Tsunetsugu, Y., & Kagawa, T. (2014). The influence of urban green environments on stress relief measures: A field experiment. *Journal of Environmental Psychology*, *38*, 1–9.

United Nations, Department of Economic and Social Affairs, Population Division (2014). *World Urbanization Prospects: The 2014 Revision*, Highlights (ST/ESA/SER.A/352).

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–1070.

Willson, E. O. (1984). *Biophilia*. Massachusetts, Cambridge: Harvard University Press.

Academic Stress Among University Students: A Quantitative Study of Generation Y and Z's Perception

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ABSTRACT

Concerns on academic-related stress among students in institutions of higher learning are widespread. Pursuing tertiary education is said to be stressful as students pass through the process of adapting to new educational and social environments. Past literature has highlighted that common academic stressors include family-related pressures, scholarship requirements, financial burdens, competition in class and course-related stress. These stressors trigger physical and psychological issues resulting in lack of energy, loss of appetite, headaches, sleep problems or gastrointestinal problems. Although studies have been done on common stressors in universities/colleges, perceptions of what are considered academic stressors from the Generation Y and Z perspectives using the Perceived Stress Test (PSS) have not been carried out in the Malaysian context. Thus, this quantitative study aims to identify the perceptions of Gen Y and Z (18-25 years old) students to identify factors attributing to stress and their effects. The findings show that 88% of the respondents confirmed that studies are the main cause of their stress, while 78% admitted facing a moderate stress level and out of this, 36% had BMI that fell in the overweight/ obese category. Further, the study indicates that 54% experienced sleeping disorders. It is hoped that the findings will add to the understanding of the stress levels among Generation Y and Z to enable policy-makers and university/college management teams to strategise actions to alleviate issues arising from academic stress among students.

Keywords: Academic stress, perceived stress test, biochemical changes, physical and psychological issues, stress factors

INTRODUCTION

Stress is a multi-faceted construct that is affected by a large number of factors. According to Towbes and Cohen (1996), stress is a major issue for college students as they cope with a variety of academic, social and personal challenges. Most first-year undergraduates are living apart from their parents for the first time and in addition, more advanced undergraduates face continuing pressure for academic performance as well as in making difficult career choices and job search issues (Oman, Shapiro, Thoresen, Plante, & Flinders, 2008). McNamara (2000) supported this argument, stating that the transition from childhood to young adulthood, often marked by beginning college education, was a particularly stressful time. According to Thawabieh and Qaisy (2012), the transition of students from the school environment to university environment could cause psychological, academic and social shock due to the differences in the education system in terms of new methods of teaching, academic requirements, type of relationship between students and faculty and even relationships among students themselves.

Stress has been shown to manifest as fatigue, tension, dizziness, sleeplessness, tachycardia, gastrointestinal symptoms, irritability, anxiety and cynicism (Cecchini & Friedman, 1987; Grandy, Westerman, Lupo & Combs 1988; Knudsen, 1978; Martinez, 1977; Tedesco, 1986; Wexler, 1978). Since admission to professional courses is largely on the basis of merit, competition is intense and many students may have to settle for an educational programme that is not their first choice. Previous studies have shown that these students may experience higher stress than those who enrolled in their preferred educational programme (Rajab, 2001). Other symptoms of stress highlighted by researchers over the years include anxiety and depression (Segrin, 1999), suicidal ideation and hopelessness (Dixon, Rumford, Heppner, & Lips 1992), poor health behaviour (Naquin & Gilbert, 1996; Sadava & Pak, 1993), increase in headaches (Labbé, Murphy, & O'Brien, 1997), sleep disturbances (Verlander, Benedict, & Hanson, 1999), increased rates of athletic injury (Laubach, Brewer, Van Raalte, & Petitpas 1996) and frequent occurrences of the common cold (Stone et.al., 1992).

Research on stress among students and their effects have been well-documented in many Western countries. Researchers are in agreement that students share common academic stressors such as family-related pressures, scholarship requirements, financial burdens, competition in class, examination, time-management and course-related stress. However, there has been a dearth of studies on the perceptions of Gen Y and Z about academic stressors and their effects, especially in the Malaysian context. Thus, this quantitative study aimed to identify the perceptions of Gen Y and Z students in a tertiary education institution in Malaysia as to the factors causing them stress and the effects of stress on their mental and physical health. For the purpose of this study, Generation Y will

refer to those born between 1981 and 1994, while Generation Z will include those born from 1995 to 2012 (McCrindle, 2006). The reason for choosing Generation Y and Z as the sample was due to the fact that these generations grew up in an era that was totally different from that of baby boomers and Generation X. Their lives whirl around fading culture, secularism and the advent of digital technology. Surrounded by modern gadgets run on scientific technology that support an increasingly perplexing lifestyle impacting hugely on family relationships has exposed these generations to higher stress and challenges in coping with life issues.

As issues related to stress and health have constantly triggered concerns and debates at various levels of stakeholders, the focus of this research was mainly to study the association of stress levels on body mass index (BMI), blood glucose and cholesterol levels, sleep deprivation as well as blood pressure. The data obtained from this research on Generation Y and Z was, therefore, important as it may be able to detect the stress burden faced by younger generations as high levels of stress may result in more severe or chronic problems as the generations age. The specific objectives of this study were:

(a) to categorise the stress levels according to low, moderate and high levels based on the Perceived Stress Score (PSS) scoring system;

(b) to identify the factors contributing to stress and its effects on the daily activities of students; and

(c) to examine the relationship between stress levels and the research variables (BMI, blood glucose levels, systolic blood pressure and sleeping disorders).

LITERATURE REVIEW

Research into stress among students is not new. Researchers have been researching and debating the issue for a very long time as it is essential to continue to understand how students perceive and manage stress in their daily lives. Stress has been defined in varied ways. According to Lazarus and Cohen (1977) as cited in Hamaideh (2011, p. 70), stress means "any event in which internal and/or environmental demands exceed the adaptive resources of an individual or social system," while stressors are defined as "demands made by the internal or external environmental stimuli that affect the balance, thus influencing physical and psychological well-being of an individual and requiring actions to restore the balance." According to Pariat, Rynjah, Joplin and Kharjana (2014), although college life is one of the most entertaining and unforgettable experiences of the individual, a closer perspective would indicate that college students encounter a number of challenges in their daily lives that contribute to stress and if not dealt with can only escalate and hamper their academic performance and emotional and social well-being. There have also been studies on the effects of stress on physical health. A study by Jenkins (1982) noted that for myocardial infarction, a condition where the heart muscle died, a

certain cluster of symptoms and complaints such as poor sleep, exhaustion and inability to relax were confirmed risk factors.

Researchers have identified that stress among students is triggered by different sources in their academic life due to the different personality and characteristics that affect the way they react to those stressors (Gadzella, 2004; Misra & McKean, 2000). According to Furnham (2005), there are three perceptions of stress i.e. response-based or emanating from the individual's reactions to events and circumstances; stimulus-based or the result of events and circumstances; and interactive or resulting from the interplay between stimuli and responses. Many researchers have also experientially studied the relationship between demographic factors and stress. Thawabieh and Qaisy (2012) in their research highlighted three key research studies in this area i.e. Hamaideh (2011), Chen, Wong, Ran and Gilson (2009), and Sulaiman, Hassan, Sapian and Abdullah (2009), all of which are discussed here. According to Thawabieh and Qaisy, the study of Hamaideh (2011) indicated that the highest group of stressors experienced by students was self-imposed stressors followed by pressure and cognitive responses. They added that Chen et al. (2009)'s study that was carried out to describe the relationship between college stress, coping strategy and psychological well-being proved that psychological well-being had a negative relationship with college stress and a positive coping strategy had significant buffering effects on

psychological health problems. Meanwhile, Sulaiman et al. (2009)'s study found that a significant difference in the level of stress attributed to gender between rural and urban secondary school students. The study was comprehensive and highlighted that factors such as parenting style and parents' education background do influence students' stress. Other key researchers in this area were also cited in their study, such as Bayram and Bilgel (2009), Canales-Gonzales and Kranz (2008), Wong, Cheung, Chan, Ma and Wa Tang (2006) as well as Skirka (2000).

In the Malaysian context, there has been an increase in research in this area in the past decade. However, most of the research in Malaysia has been conducted in public universities only. Shamsuddin et al. (2013) carried out a study to assess the prevalence of depression, anxiety and stress to identify their correlation among university students. Johari and Hassim (2009) carried out a study to determine the prevalence of stress and coping strategies among medical students in the National University of Malaysia, Malaysia University of Sabah and Universiti Kuala Lumpur and Royal College of Medicine, Perak. Yee and Yusoff (2013) carried out a comparative study to identify the prevalence and sources of stress among medical students in Universiti Sains Malaysia and Universiteit Maastricht. Saub (2013) carried out research to explore the association between social support and stress levels among preclinical and clinical dental students in Malaysia.

It is inevitable that stress plays a significant role in human mortality and morbidity in developed nations around the world; Malaysia is not an exception. Stress has been a chief contributor to the burden of suffering that is causing a wide range of human illness (Macik-Frey, Quick, & Nelson, 2007). According to Quick and Cooper (2003), stress is either directly or indirectly linked to seven out of 10 leading causes of death in the United States, the United Kingdom and all developed nations. They further identified the seven causes as heart disease, cancer, stroke, injuries, suicide/homicide, chronic liver disease and chronic bronchitis. Interestingly, Cooper and Quick (2017) regarded stress as both the spice of life and the kiss of death. They went on to state that it was as an excellent rubric for a domain of knowledge for clinical, medical and psychological practice.

MATERIALS AND METHODS

In this section, the methodology used in the research is discussed. The researchers adopted a quantitative research method as it had been proven that understanding perceptions is best done through this manner (Creswell, 2013). In carrying out this research, data were collected through a survey. The researchers developed a suitable questionnaire incorporating the Perceived Scale Test (PSS) developed by Cohen, Kamarck and Mermelstein (1983), which was validated through a pilot study administered among 15 students from the same university. Based on the responses, the survey questionnaire was edited to improve clarity by removing inconsistencies and errors. The questionnaire was divided into four parts: demographic questions, Perceived Stress Test (PSS), causes of stress and its effects as well as biochemical and anthropometric measurements. The Perceived Stress Test (PSS) is a 10-question survey that results in a scoring to categorise stress levels into low (scores 0-13), medium (score 14-26) and high (scores 27-40) categories. The responses to the questionnaire were based on a 5-point Likert scale with response options of 0=never, 1=almost never, 2=sometimes, 3=fairly often, and 4=very often. The selection of respondents for the survey was done using a non-probability convenient sampling method from which students from a private university in Malaysia offering undergraduate programmes where one of the researchers was affiliated to be selected. In order to fulfil research ethical requirements, approval from the university was obtained. Consent was also obtained from the respondents comprising students from Year 1 to Year 3. Prior to obtaining consent, the purpose of the study was communicated well in advance to ensure that the students' participation in the research was voluntary. The students' body mass index (BMI) was determined by measuring body weight and height using calibrated equipment and then classifying the BMI value using the Asian BMI range. Blood glucose and cholesterol were obtained by finger-pricking and then analysing the blood sample using a glucometer and a cholesterol meter. A calibrated digital blood pressure

monitor was used to obtain systolic and diastolic blood pressure readings. All the responses and measurements were captured and subsequently, the data were coded and then analysed to ensure anonymity and confidentiality of respondents. The quantitative data were analysed using SPSS version 23. The findings were then discussed in line with the objectives of the study, which were to investigate stress levels and factors attributing to stress and the effects of stress.

RESULTS AND DISCUSSION

This section explains the findings obtained from the survey carried out among 124 respondents from a private university in Malaysia. Table 1 provides the demographic details of the respondents involved in the study.

Out of the 124 respondents, 21.8% were males and 78.2% were females. This finding was not surprising as research has

proven that female students outnumber male students in higher institutions of education in Malaysia. In 2016, there were approximately 399,240 female students enrolled in public higher education institutions in Malaysia, compared with around 268,250 male students (Statista, 2018). The respondents were all aged between 18 and 25 years old and were pursuing a degree programme in the university. In terms of age, the respondents were divided into two categories: 21 and below and above 21. The findings indicated that 78.2% of the respondents were aged 21 and below and 21.8% were aged above 21. An analysis of the race distribution indicated that the majority were Chinese (54.8%), followed by Indians (21.0%) and Malays (18.5%). A small percentage (5.7%) consisted of respondents from other races, including international students from various countries such as Nepal and Indonesia. Figure 1 shows the classification of stress levels based on the scoring of the Perceived Stress Test (PSS).

Table 1
Demographic details of respondents

Demographics	Frequency (N)	Percentage (%)
Gender		
Male	27	21.8
Female	97	78.2
Age		
21 and below	97	78.2
Above 21	27	21.8
Race		
Chinese	68	54.8
Indian	26	21.0
Malay	23	18.5
Others	7	5.7
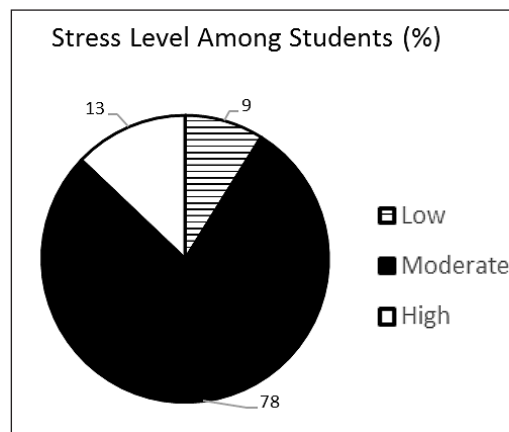
Figure 1. Classification of stress levels among respondents.

Based on the findings represented in Figure 1, it was noted that the majority of the respondents, or 78.2% of the respondents, fell under the moderate level of stress category, followed by those in the high level (12.9%) category. Only a small number of respondents (8.9%) fell under the low level category. Further analysis of the figures brought to light some interesting findings. From the total of 16 respondents who indicated high level of stress, 10 (63%) were aged 21 and below, while the remaining six (37%) were aged above 21. The number of respondents who reported experiencing moderate and low levels of stress also showed a similar pattern i.e. the majority were in the age group of 21 and below.

The survey also sought answers from the respondents on the factors that contributed to their stress. Out of the 124 respondents, only 119 respondents responded to this question. Table 2 indicates the findings.

Table 2
Factors contributing to stress

Factors	Frequency (N)	Percentage (%)
Studies	105	88.2
Peer pressure	33	27.7
Family problems	31	26.1
Financial problems	29	24.4
Others	2	1.7

Almost 90% of the respondents confirmed that their studies were the cause of the stress they were experiencing. This included attending lectures, preparing for tutorials, carrying out individual and group assignments, preparing oral presentations as well as preparation for exams. The other factors were not indicated as frequently as studies. This confirmed findings from other research studies that identified university life as being a very stressful part of a student's life (Towbes & Cohen, 1996; Thawabieh & Qaisy, 2012).

In response to the question on whether stress affected their daily lives, 56% of the respondents responded affirmatively, stating it did affect their daily lives, while the remaining 44% stated that it did not. Out of the 69 respondents (56%) who confirmed that stress affected their daily lives, 62 (90%) were found to be in the moderate and high stress level categories. With regard to the effect of stress on daily life, the Perceived Stress Test identified different impacts on the emotional state of the respondents such as nervousness, anger, loss of control, inability to cope and feelings of irritation. In the survey, the respondents were asked to state the frequency of these occurances over the period of one month. As indicated in Figure 1, the respondents who fell under the categories of moderate and high levels of stress selected the options 'fairly often' or 'very often' to show how frequently they were affected by the stress experienced.

Since past researchers (Lavie, 2001; Pillar, Malhotra, & Lavie, 2000; Van Reeth et al., 2000) have identified sleep as one of the most common daily activities affected by stress, in the current research, an in-depth analysis was done to identify the extent to which sleep was affected. Two

questions specifically focussed on sleep to understand how student stress affected it. The respondents were aske whether they encountered any problems in sleeping and if yes, they were requested to state the nature of the problem. It was noted that 54% of the respondents, equivalent to 67 respondents experienced some form of sleeping disorder. The sleeping disorders experienced by these 67 respondents were then analysed. Figure 2 indicates the findings.
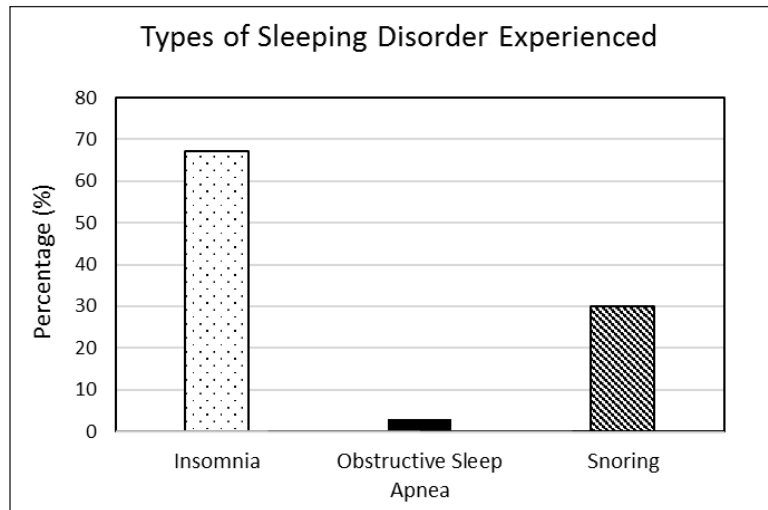
Figure 2. Types of sleeping disorder experienced by respondents

As shown in Figure 2, a total of 45 respondents (67.2%) experienced insomnia, a condition where one faces prolonged, abnormal inability to obtain adequate sleep (Medline online dictionary, 2012). Another 20 respondents (29.8%) reported snoring while sleeping. A small number (3%) said they experienced obstructive sleep apnea, a condition indicated by brief periods of recurrent cessation of breathing during sleep that is caused especially by obstruction of the airway or a disturbance in the brain's respiratory centre (Medline online dictionary, 2012). These findings are similar to the claim made by Sadeh, Keinan and Daon (2004) that sleep problems faced as a result of stress included difficulty in falling asleep, fragmented sleep as well as recurrent and frequent nightmares. According to Sadeh (1996) as well as Sadeh and Gruber (2002), difficulty in sleeping is related to the response mode identified as the sleep-wake system, where there is a "turn on" response of the "alarm phase" as labeled by Selye (1983) (as cited in Sadeh, Keinan and Daon, 2004, p. 542) that is compatible with hypervigilance and incompatible with sleep.

The researchers also went on to compare the body mass index (BMI) of the respondents with their category of stress level as indicated by the Perceived Stress Test (PSS). Table 3 portrays the results obtained from the survey.

Table 3
Comparison between body mass index and stress level categories

BMI Classification	Stress Level Categories		
	Low (N=11)	Moderate (N=97)	High (N=16)
Underweight	1	16	4
Ideal	3	46	5
Overweight/Obese	7	35	7

As indicated in Table 3, 35 respondents (36%) who experienced a moderate level of stress were overweight/obese while seven (44%) who experienced a high level of stress were overweight/obese. The findings were similar to past research that has proven that obesity is a result of stress. According to Kivimäki et al. (2006), there is a possibility that stress can affect body mass index for it may cause some people to eat less and lose weight but others to eat more and gain weight.

Table 4
Data for biochemical and physical parameters

Parameter	Mean	Standard Deviation
Glucose		
Low stress category	3.72	0.652
Moderate stress category	3.57	0.745
High stress category	3.79	0.629
Cholesterol		
Low stress category	5.12	0.729
Moderate stress category	4.83	0.732
High stress category	5.20	0.735
Body Mass Index		
Low stress category	26.57	7.973
Moderate stress category	22.70	5.576
High stress category	23.68	6.536
Systolic Blood Pressure		
Low stress category	121.09	13.989
Moderate stress category	116.87	14.163
High stress category	118.81	14.630

Table 4 indicates the mean and standard deviation values obtained from respondents based on their stress level category. An ANOVA test was carried out to determine if there were any differences in BMI, systolic blood pressure and glucose and cholesterol levels in the different categories of stress. The analysis indicated that there was no

significant difference between the three stress categories (low, moderate and high) and the measured variables.

In order to identify if a relationship existed between the variables, a Pearson correlation test was carried out. Table 5 shows the findings. The test indicated evidence that a positive relationship existed between BMI, glucose levels, cholesterol levels and systolic blood pressure. However, no evidence showed that a relationship existed between stress levels and the measured variables.

Table 5
Correlation between variables

		Stress	BMI	Glucose	Cholesterol	SystolicBP
Stress	Pearson Correlation	1	-0.11	0.04	0.063	-0.023
	Sig. (2-tailed)		0.226	0.659	0.492	0.802
	N	124	124	124	122	124
BMI	Pearson Correlation	-0.11	1	0.278**	0.194*	0.407**
	Sig. (2-tailed)	0.226		0.002	0.032	0
	N	124	124	124	122	124
Glucose	Pearson Correlation	0.04	0.278**	1	0.055	0.281**
	Sig. (2-tailed)	0.659	0.002		0.546	0.002
	N	124	124	124	122	124
Cholesterol	Pearson Correlation	0.063	0.194*	0.055	1	0.162
	Sig. (2-tailed)	0.492	0.032	0.546		0.074
	N	122	122	122	122	122
Systolic BP	Pearson Correlation	-0.023	0.407**	0.281**	0.162	1
	Sig. (2-tailed)	0.802	0	0.002	0.074	
	N	124	124	124	122	124

** Correlation is significant at the 0.01 level (2-tailed)
 * Correlation is significant at the 0.05 level (2-tailed)

CONCLUSION

This study was done to assess the perceived factors of stress among Generation Y and Z students in a private university in Malaysia. The findings of the research showed clearly that the majority of the respondents, at the percentage of 78.2%, fell under the moderate level of stress category. It was also proven without doubt that among the factors identified as sources of stress were their studies, peer pressure, family problems, financial problems and others. Their studies

(88%) were said to be the factor that caused the most stress. With regard to the effects of stress, 56% of the respondents claimed to have experienced some form of sleep disorder. The research findings also showed that there was a positive relationship between BMI, glucose levels, cholesterol levels and systolic blood pressure. However, there was no evidence to indicate that a relationship existed between stress levels and the measured variables.

Based on the findings, the researchers recommended that university/college management teams must take positive steps to reduce students' stress to ensure that they possess good mental health and are able to perform well in their studies. They can do this by creating a conducive learning environment with suitable teaching and learning methods. In addition, they need to provide adequate counselling in order to decrease psychological and social stress. The researchers also recommend that university/college management teams should place a lot of emphasis on ensuring courses are designed properly. They should also ensure that student support services are set in place, students are made aware of potential stress that can occur in the period of transition from school to university/college life as well as that adequate training and workshops are conducted to help students handle stress. All these measures will help decrease the stress faced by students as a result of their academic pursuits. Further, it is accepted that there are limitations in this study, especially in the sample size. Thus, it is recommended that a similar study be carried out among a larger sample of respondents to ensure validity of findings and to generalise the findings to the whole population. In addition, to confirm the present findings and to enlighten corrective interventions, it is also necessary for future research to be carried out incorporating a wider array of information in terms of sociodemographic, psychosocial and institutional variables.

REFERENCES

Bayram, N., & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology, 43*(8), 667–672.

Canales-Gonzales, P. L., & Kranz, P. L. (2008). Perceived stress by students in a pharmacy curriculum. *Education, 129*(1), 139–147.

Cecchini, J. J., & Friedman, N. (1987). First-year dental students: Relationship between stress and performance. *International Journal of Psychosomatics*, *34*, 17–19.

Chen, H., Wong, Y. C., Ran, M. S., & Gilson, C. (2009). Stress among Shanghai university students: The need for social work support. *Journal of Social Work, 9*(3), 323–344.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 386–396.

Cooper, C. L., & Quick, J. C. (Eds.). (2017). *The handbook of stress and health: A guide to research and practice.* Hoboken, New Jersey, USA: John Wiley & Sons.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California, USA: Sage Publications.

Dixon W. A., Rumford K. G., Heppner P. P., & Lips B. J. (1992). Use of different sources of stress to predict hopelessness and suicide ideation in a college population. *Journal of Counselling Psychology, 39*(3), 342–349.

Furnham, A. (2005). *The psychology of behaviour at work: The individual in the organization.* Hove: Psychology Press.

Gadzella, B. M. (2004). Three stress groups on their stressors and reactions to stressors in five studies. *Psychological Reports, 94*(2), 562–564.

Grandy, T. G., Westerman, G. H., Lupo, J. V., & Combs, C. G. (1988). Stress symptoms among third-year dental students. *Journal of Dental Education, 52*(5), 245–249.

Hamaideh, S. H. (2011). Stressors and reactions to stressors among university students. *International Journal of Social Psychiatry, 57*(1), 69–80.

Jenkins, C. D. (1982). Psychosocial risk factors for coronary heart disease. *Journal of Internal Medicine, 211*(S660), 123–136.

Johari, A. B., & Hassim, I. N. (2009). Stress and coping strategies among medical students in National University of Malaysia, Malaysia University of Sabah and University Kuala Lumpur Royal College of Medicine Perak. *Journal of Community Health, 15*(2), 106–115.

Kivimäki, M., Head, J., Ferrie, J. E., Shipley, M. J., Brunner, E., Vahtera, J., & Marmot, M. G. (2006). Work stress, weight gain and weight loss: Evidence for bidirectional effects of job strain on body mass index in the Whitehall II study. *International Journal of Obesity, 30*(6), 982–987.

Knudsen, W. (1978). Quality of life of the dental student. *Tandlakartidningen, 70*(3), 183–186.

Labbé, E. E., Murphy, L., & O'Brien, C. (1997). Psychosocial factors and prediction of headaches in college adults. *Headache: The Journal of Head and Face Pain, 37*(1), 1–5.

Laubach, W. J., Brewer, B. W., Van Raalte, J. L., & Petitpas, A. J. (1996). Attributions for recovery and adherence to sport injury rehabilitation. *Australian Journal of Science and Medicine in Sport, 28*(1), 30–34.

Lavie, P. (2001). Current concepts: Sleep disturbances in the wake of traumatic events. *New England Journal of Medicine, 345*(25), 1825–1832.

Macik-Frey, M., Quick, J. C., & Nelson, D. L. (2007). Advances in occupational health: From a stressful beginning to a positive future. *Journal of Management, 33*(6), 809–840.

Martinez, N. P. (1977). Assessment of negative effects in dental students. *Journal of Dental Education, 41*(31), 6–7.

McCrindle, M. (2006). *New generations at work: Attracting, recruiting, retaining and training generation Y.* Sydney, Australia: The ABC of XYZ.

McNamara, S. (2000). *Stress in young people: What's new and what can we do?* London & New York: Continuum.

Medline Plus Medical Dictionary (online). (2012). Retrieved November 23, 2017, from https://medlineplus.gov/mplusdictionary.html.

Misra, R., & McKean, M. (2000). College student's academic stress and its relation to their anxiety, time management and leisure satisfaction. *American Journal of Health Studies, 16*(1), 41–51.

Naquin, M. R., & Gilbert G. G. (1996). College students' smoking behaviour, perceived stress, and coping styles. *Journal of Drug Education, 26*(4), 367–376.

Nguyen-Michel, S. T., Unger, J. B., Hamilton, J., & Spruijt-Metz, D. (2006). Associations between physical activity and perceived stress/hassles in college students. *Stress and Health, 22*(3), 179–188.

Oman, D., Shapiro, S. L., Thoresen, C. E., Plante, T. G., & Flinders, T. (2008). Meditation lowers stress and supports forgiveness among college students: A randomized controlled trial. *Journal of American College Health, 56*(5), 569–578.

Pariat, M., Rynjah, M., Joplin, M., & Kharjana M. (2014). Stress levels of college students: Interrelationship between stressors and coping strategies. *IOSR Journal of Humanities and Social Science, 19*(8), 40–56.

Pillar, G., Malhotra, A., & Lavie, P. (2000). Post-traumatic stress disorder and sleep – What a nightmare! *Sleep Medicine Reviews, 4*(2), 183–200.

Quick, J. C., & Cooper, C. L. (2003). *Stress and strain*. Oxford, UK: Health Press.

Rajab, L. D. (2001). Perceived sources of stress among dental students at the University of *Jordan. Journal of Dental Education, 65*(3), 232–241.

Sadava, S. W., & Pak, A. W. (1993). Stress-related problem drinking and alcohol problems: A longitudinal study and extension of Marlatt's model. *Canadian Journal of Behavioural Science, 25*(3), 446–464.

Sadeh, A. (1996). Stress, trauma, and sleep in children. *Child and Adolescent Psychiatric Clinics of North America, 5*, 685–700.

Sadeh, A., & Gruber, R. (2002). Stress and sleep in adolescence: A clinical-developmental perspective. In M. A. Carskadon (Ed.), *Adolescent sleep patterns: Biological, social, and psychological influences* (p. 236–253). New York: Cambridge University Press.

Sadeh, A., Keinan, G., & Daon, K. (2004). Effects of stress on sleep: The moderating role of coping style. *Health Psychology, 23*(5), 542–545.

Saub, R., Rajesh, S. M., Muirhead, V., Dom T. M., Ismail, N. M., & Jamaludin, M. (2013).

Perceptions of dental stress and social support among Malaysian dental students. *Annals of Dentistry (ADUM), 20*(1), 1–7.

Segrin, C. (1999). Social skills, stressful life events, and the development of psychosocial problems. *Journal of Social and Clinical Psychology, 18*(1), 14–34.

Shamsuddin, K., Fadzil, F., Ismail, W. S. W., Shah, S. A., Omar, K., Muhammad, N. A., . . . Mahadevan R. (2013). Correlates of depression, anxiety and stress among Malaysian university students. *Asian Journal of Psychiatry, 6*(4), 318–323.

Skirka, N. (2000). The relationship of hardiness, sense of coherence, sports participation, and gender to perceived stress and psychological symptoms among college students. *Journal of Sports Medicine & Physical Fitness, 40*(1), 63–70.

Statista. (2018). *Students in public higher education institutions in Malaysia 2012-2016 by gender*. Retrieved May 8, 2017, from https://www.statista.com/statistics/794845/students-in-public-higher-education-institutions-by-gender-malaysia/

Stone, A. A., Bovbjerg, D. H., Neale, J. M., Napoli, A., Valdimarsdottir, H., Cox, D., . . . Gwaltney Jr, J. M. (1992). Development of common cold symptoms following experimental rhinovirus infection is related to prior stressful life events. *Behavioral Medicine, 18*(3), 115–120.

Sulaiman, T., Hassan, A., Sapian, V. M., & Abdullah, S. K. (2009). The level of stress among students in urban and rural secondary schools in Malaysia. *European Journal of Social Sciences, 10*(2), 179–184.

Tedesco, L. A. (1986). A psychosocial perspective on dental education experience and student performance. *Journal of Dental Education, 50*(10), 601–605.

Thawabieh, A. M., & Qaisy L. M. (2012). Assessing stress among university students. *American*

International Journal of Contemporary Research, 2(2), 110–116.

Towbes, L. C., & Cohen, L. H. (1996). Chronic stress in the lives of college students: Scale development and prospective prediction of distress. *Journal of Youth and Adolescence, 25*(2), 199–217.

Van Raalte J. L., & Brewer B. W. (2014). *Exploring sport and exercise psychology*. (pp. 257–274). Washington, DC: American Psychological Association.

Van Reeth, O., Weibel, L., Spiegel, K., Leproult, R., Dugovic, C., & Maccari, S. (2000). Interactions between stress and sleep: From basic research to clinical situations. *Sleep Medicine Reviews, 4*(2), 201–219.

Verlander, L. A., Benedict, J. O., & Hanson, D. P. (1999). Stress and sleep patterns of college students. *Perceptual and Motor Skills, 88*(3), 893–898.

Wexler, M. (1978). Mental health and dental education. *Journal of Dental Education, 42*(2), 74–77.

Wong, J. G., Cheung, E. P., Chan, K. K., Ma, K. K., & Wa Tang, S. (2006). Web-based survey of depression, anxiety and stress in first-year tertiary education students in Hong Kong. Australian & New Zealand. *Journal of Psychiatry, 40*(9), 777–782.

Yee, L. Y., & Yusoff, M. S. B. (2013). Prevalence and sources of stress among medical students in Universiti Sains Malaysia and Universiteit Maastricht. *Education in Medicine Journal, 5*(4), e43-e41.

Collaboration and Co-Teaching: Professional Models for Promoting Authentic Engagement and Responsive Teaching

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ABSTRACT

The review aims to consider the theoretical approaches of collaboration and co-teaching, motivational factors, pedagogical implications, and barriers, thus contributes to the literature in the field. To that end, a literature search has been conducted from different libraries and scholarly platforms, which included Medline, ERIC, PubMed, and Google Scholar. The studies that have discussions on the implication of co-teaching or collaborative teaching strategies were selected. A comprehensive scrutiny process was applied to filter out relevant and quality studies. 12 articles, inclusive of original and review article, have been finalized for systematic analysis. The selected articles have shown that positive outcomes are closely associated with the collaborative teaching or co-teaching methods, and have a closer relevance to the students' and teachers' achievements. Joint work, teamwork, and co-teaching approaches also support the teachers for their professional development and enhance their learning abilities. Moreover, the results have shown that interest in co-teaching has been intensified considerably in most of the educational milieus including special education to accommodate the students' special needs. Collaborative and co-teaching approaches play an important role in improving students' strengths, beliefs, and values, especially in the field of English language teaching, therefore, teachers who are dissatisfied with the outcomes of traditional learning methods are willing to apply collaboration and co-teaching models.

Keywords: Collaborative teaching, co-teaching, learning objectives, pedagogical implications, professional development

INTRODUCTION

Collaboration refers to a process of decision making, joint planning, and problem solving for the achievement of a similar goal. Similarly, co-teaching refers to the restructuring of teaching procedures, in

which two or more educators; possessing distinct sets of skills, work in a coactive and coordinated fashion to jointly teach a group of students. The concepts of collaboration or co-teaching are not discussed widely within the educational sector. Therefore, the attempts to apply the concepts of collaboration and co-teaching is still new at the global level despite the fact that these concepts have been developed earlier. Before the development of these concepts, there were many traditional techniques and approaches that were used to gain maximum outcomes. Such traditional approaches in the academic domain are mainly used to target EFL students.

From the perspective of English language for EFL students; various traditional methods and models are applied to gain positive outcomes. Grammar Translation Method (GTM) is used for the analysis of grammatical rules of the language. This method provides learners with the ability to master grammar, vocabulary, and writing skills. However, this model has also gained partial success. Afterwards, Direct Method (DM) is also applied within the educational sector. Direct Method emphasizes the use of target language only (Richards & Rodgers, 2014). However, issues of rigidity along with lack of comprehension have been raised after the application of this method. Afterwards, the audio-lingual method is applied, which has focused on the memorization of a series of dialogues (Griffiths, 2004). Similarly, grammar-based and situational language methods are also applied; however, all of such methods have

limited scope. Therefore, the concept of collaborative teaching and co-teaching has emerged to resolve current issues.

Collaborative teaching takes place when two or more teachers work together to co-plan, co-instruct, and co-assess a group of heterogeneous students to meet their needs (Dove & Andrea, 2017). It takes place when a group of learning community work together to achieve a common goal to meet the needs of students in a classroom. Co-teaching tends to illustrate the complexity of the concepts by teaching in a collaborative environment. The teachers try their best to implement this approach in their teaching methods; despite of the hurdles. Collaboration and co-teaching are associated with the joint efforts of teachers to retrieve effective academic solutions in regards of existing problems or issues to achieve a common goal (Solis et al., 2012).

Kison (2012) had presented a model in which the collaboration was discussed thoroughly. The model had mentioned that general and special education teachers should provide instructions to improve collaboration in a single classroom. The study showed that the inclusion of this effective method motivated teachers to continue participating in co-teaching process. It also helped in identifying the factors that were likely to interfere in the continuation of co-teaching programs. Similarly, Kaur (2017) had mentioned that teachers must recognize and realize the learning mode of students; therefore, relevant approaches must be taken into consideration for improving learning environment. Gabarre

and Gabarre (2010), had also supported the use of collaborative teaching to assure better academic achievements of students, and Fung (2011) had identified beneficial outcomes because of collaborative tasks.

The rationale behind the development of pedagogical implications is mainly associated with the future recommendations to improve the educational processes. Similarly, the analysis of the finalized articles is used to derive conclusive remarks about the significance of co-teaching or collaborative teaching along with the motivational factors, which result in the adoption of such strategies. Therefore, the present study has mainly focused on the theoretical approaches of collaboration and co-teaching, as discussed in previous studies, and thus, contributes to the literature in the field by the scrutinized and quality studies it reviews and by the conceptual framework it provides. Moreover, it has also attempted to discover what motivates teachers to join and carry on with cooperative team teaching by providing examples. The study has further attempted to identify the advantages along with the complexity that teachers may experience in their application of collaboration and co-teaching models. Further sections have provided the conceptual framework, methodology, review findings, and conclusion.

Conceptual Framework

Teamwork plays a major role within any organization to achieve respective goals and objectives. Similar implications are assured in the educational sector to have proficient collaborators. The trend of applying collaboration and teamwork models is not new; however, its implication within educational settings in terms of collaborative and co-teaching models plays a major role in the development of transformed students (Slavit et al., 2011). It is said that co-teaching or collaboration among teachers would be helpful for the students to develop their skills and capabilities by keeping their teachers as role models. While understanding the concept that proficient collaboration could be among teachers, co-teaching contributes to the implementation of student-centered, innovative, and collaborative learning environment. This concept has been genuinely supported by several studies (Slavit et al., 2011).

In a similar context, the conceptual framework has also shown that responsive teaching along with a better engagement has four basic advantages, which entail that the educational sector must adopt the strategies related to co-teaching or collaborative teaching. The four basic advantages mainly include better environment within schools and classrooms, better learning opportunities for the students, transformation of students after adopting positive behaviors from their teachers and progressed educational sector. All of these four key advantages have a direct relevance to the educational goals that are generally created by the governments. Therefore, it is said that this conceptual framework would allow the investigators and other educationists to develop strategic co-teaching or collaborative teaching strategies.

Based on a comprehensive analysis of previous studies, models, and perceptions of professionals; a conceptual framework has been developed (Figure 1). The model has highlighted certain factors, which have assured the implication of collaborative and co-teaching models for the promotion of engaged and responsive teaching. The following model has argued that there are three elements, which usually urge the need for collaborative teaching and co-teaching approaches. The three elements include lack of support, professional development and students' development. Lack of support from the administration or schooling management results in the need for teachers to adopt different methods or models, related to co-teaching or collaboration.

Implications of these manifestations would certainly result in responsive teaching within the classrooms. The significance behind the engaged and responsive teaching is that the better engagement between the teachers and students would certainly result in the overall achievement of the educational goals and objectives. Moreover, responsive teaching would also allow the students to assure their personal development within academic settings. Therefore, literature has indicated that responsive teaching along with better engagement is directly associated with the students' development and improved educational outcomes. In a similar context, the conceptual framework has also shown that responsive teaching along with a better engagement has four basic advantages, which entail that the educational sector must adopt the strategies related to co-teaching or collaborative teaching. The four basic advantages mainly include better environment within schools and classrooms, better learning opportunities for the students, transformation of students after adopting positive behaviors from their teachers and progressed educational sector. All of these four key advantages have a direct relevance to the educational goals that are generally created by the governments. Therefore, it is said that this conceptual framework would allow the investigators and other educationists to develop strategic co-teaching or collaborative teaching strategies.

Figure 1. Conceptual framework

METHODS

A literature search has been carried out at a broad spectrum from different libraries and scholarly platforms. Specifically, Medline, ERIC, PubMed, and Google Scholar have been explored to retrieve quality studies, which have argued or discussed the implication of co-teaching or collaborative teaching strategies. Some of the common keywords included 'co-teaching', 'collaborative teaching', 'need for co-teaching', 'benefits of co-teaching', 'perceptions about co-teaching', 'significance of collaborative teaching', 'teaching problems', 'lack of support in teaching', 'improvements in educational sector', 'role of co-teaching', and 'professional development of teachers'. Only the research articles along with the reviewed articles have been considered; the rest of all other categories, have been excluded. All the articles that aimed for academic improvements, and related to educational domain, or teachers' perspective, have been included in the review. Moreover, only studies published during the 10-years duration (2009-2018) have been considered. Case reports, essays, and blogs have been excluded because of reduced reliability and authenticity.

The literature search has started comprehensively in all of the aforementioned platforms. Initially, 2750 abstracts have been searched based on the keywords. These abstracts were retrieved by considering the inclusion and exclusion criteria. A two-staged process has been deployed for the regulation of the entire review process. At the start, each abstract was evaluated by the investigator along with an academic professional. The reason for such a comprehensive scrutiny of the abstracts is to select the most relevant articles. Only those abstracts, which have any correlation with the collaborative teaching or co-teaching models for the development of educational domain, have been promoted. The first phase has resulted in the exclusion of 88% of the articles (2420 abstracts). The remaining articles have been promoted for the second phase of scrutiny. In total, 330 abstracts have been promoted, in which the articles were read completely to get the in-depth analysis. The inclusion criteria were again applied very strictly on such 330 articles, which has resulted in the retrieval of 53 articles in total, eliminating around 277 articles. The remaining articles were assessed on the basis of developed conceptual framework to assure the direction and significance of this study. In this phase, 41 articles have been eliminated due to less authenticity or relevancy with the identified variables. The excluded articles had focused on one obstacle instead of multiple and investigated obstacles from the perception of either teachers or students. In such a way, selection of 12 articles has been finalized, which were used for systematic review analysis. A pictorial depiction has been presented in Figure 2.

While reading full-text versions, the relevant data were evaluated on the basis of scientific quality. The following measures have been considered for finalizing and excluding articles:

- General information: The assessment was initiated from study title, year of publication, and research context.

- Topic: The topic was assessed to identify the core focus of the article.

- Research design: Research design has been assessed to analyze objectives, research design,

methods, intervention, and data analysis.

- Research population: Sampling method has also been focused, in case of the original articles.

- Overall results: Findings were comprehensively evaluated to retrieve relevant outcomes.
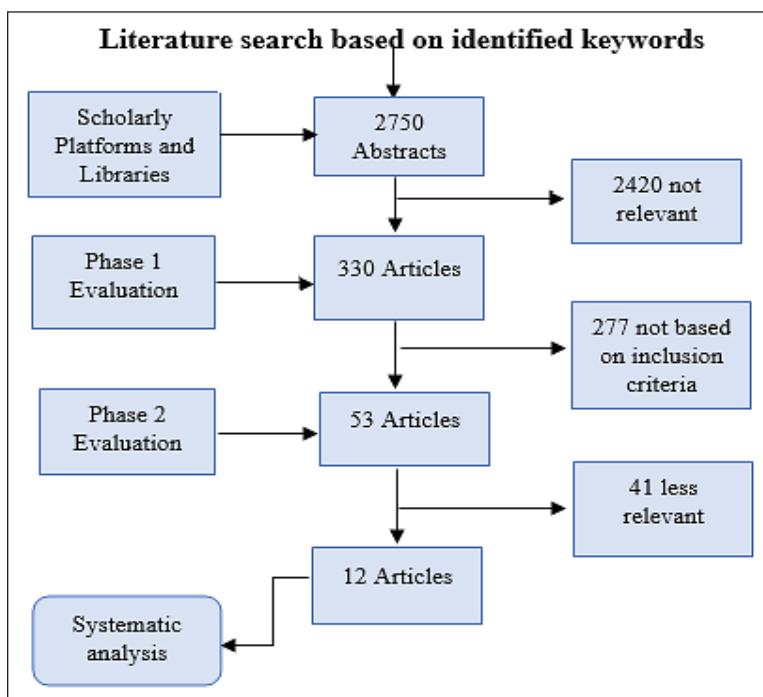
Figure 2. Literature search process

RESULTS AND DISCUSSION

The review is completely based upon 12 finalized articles; all of which have completely focused on the strategies, advantages, willingness, perceptions, and barriers for co-teaching and collaborative teaching. The review has also comprised two major sub-sections; the first sub-section is related to the analysis of finalized articles,

and the second sub-section has provided certain pedagogical implications, based on quality literature.

Summary of Finalized Articles

12 articles have been finalized, based on a comprehensive scrutiny process, which were inclusive of primary and secondary research (see Table 1). The

rationale behind the selection of the 12 articles is to identify theoretical approaches of collaboration and co-teaching. Moreover, different factors along with the advantages of collaboration have also been identified. Preston and Barnes (2017) had indicated that successful leadership was necessary to be developed, which could be achieved through collaborative environment within educational settings. Moreover, it is indicated that the implementation of collaborative teaching models requires a variety of instructional arrangements as the general education teacher works with the special education teacher. Gast, Schildkamp and van der Veen (2017) had also mentioned that the educational institutes must focus on team based professional development of their teachers, which would increase the level of the learning environment positively.

De Rijdt, Stes, van der Vleuten et al. (2013) have highlighted that the lack of promotion of collaborative or co-teaching approach is due to lack of support from the management or administration. Thus, it is concluded that the transfer of learning could be improved through collaborative approach. Heldens, Bakx and den Brok (2016) had mentioned that collaborative approach had a positive influence on the development of better learning environment within schools, which was significantly helpful for the students to improve their skills and capabilities. Similarly, Doppenberg, den Brok and Bakx (2012) indicated that joint work, collaboration, teamwork, and co-teaching approaches would surely support the teachers for their professional development, and also supported the students to enhance their learning abilities.

Liu and Tsai (2017) further mentioned that adoption of collaborative or co-teaching approach would improve students' learning. Ronfeldt, Farmer, McQueen et al. (2015) had also supported the concepts, and concluded that collaboration approaches would be helpful for the teachers to have better achievement gains. Miquel and Duran (2017) had analyzed the implication of professional development and collaborative program.

The study has mentioned that collaborative program has a positive impact on teachers' learning, attitudes and concepts. Therefore, the learning environment is witnessed to be improved through the developed program. Moolenaar, Sleegers and Daly (2011) stated that when teachers had better collaborative attitudes and well-connected professional relationship with colleagues and fellow teachers, they would retrieve better students' achievement. Similarly, Slavit et al. (2011) concluded on the basis of the findings that honest team interactions, structural and instructional support from the principal, and discussion of various students' learning data have a direct impact on better teachers' development and students' achievement. Likewise, Truijen, Sleegers and Meelissen et al. (2013) indicated that the significance of task interdependence, transformational leadership, and effective teamwork within educational domain was helpful for the teachers to assure their regular work practices.

Table 1
Systematic review

Ref #	Author Name and Year	Title of Article	Methodology	Results	Conclusive Remarks	Support of co-teaching or collaborative teaching
1	Preston and Barnes (2017)	Successful leadership in rural schools: Cultivating collaboration.	Document analysis	It has been evaluated that successful rural principals have promoted people focused relationships among students, parents, and teachers. The study has also supported to promote the collaborative approach within teaching domain.	Successful leadership can be developed with the help of developing collaborative environment within educational settings.	Yes
2	Gast, Schildkamp and van der Veen (2017)	Team-Based Professional Development Interventions in Higher Education: A Systematic Review.	Systematic review	Team based professional development among teachers is dependent upon six major factors that include self-efficacy, attitudes, professional identity, motivation, commitment, and availability.	Higher education must focus on team based professional development interventions for teachers and students to enhance their skills and competence.	Yes
3	Datnow (2011)	Collaboration and contrived collegiality: Revisiting Hargreaves in the age of accountability.	Qualitative design	The article has focused on Hargreaves' ideas related to teacher collaboration. Collaboration has both positive and negative outcomes; however, there is a need to ensure that only positive educational benefits can be retrieved with the help of collaborative approach.	Collaboration approach should be adopted by Hargreaves' idea to gain positive educational outcomes.	Yes
4	De Rijdt et al. (2013)	Influencing variables and moderators of transfer of learning to the workplace within the area of staff development in higher education: Research review.	Research review	Lack of support has been identified as a major factor that usually results in the collaboration among teachers. Therefore, it is said that transfer of learning can be improved in higher education through collaborative approach.	The development of higher education is dependent on certain variables, which are helpful to promote collaborative or co-teaching approach.	Yes

Table 1 (*continue*)

Ref #	Author Name and Year	Title of Article	Methodology	Results	Conclusive Remarks	Support of co-teaching or collaborative teaching
5	Heldens, Bakx, and den Brok (2016)	Teacher educators' collaboration in subject departments	Exploratory analysis	Teacher learning can be occurred with the help of implementing collaborative approach within school settings. However, strict focus is required from administration and teachers to improve their working practices.	Collaborative approach has a major impact on the improved learning environment within schools.	Yes
6	Doppenberg, den Brok and Bakx (2012)	Collaborative teacher learning across foci of collaboration: Perceived activities and outcomes.	Mixed research design (qualitative & quantitative)	Educators' collaborative network would be helpful to gain more coherent professional relations, which significantly results in the better learning environment.	Joint work, collaboration, teamwork, and co-teaching approaches are significantly helpful for teachers to enhance their abilities.	Yes
7	Liu and Tsai (2017)	Teachers' Experiences of Collaborating in School Teaching Teams.	Qualitative approach	Certain barriers and factors that result in the adoption of collaborative or co-teaching approach. Such factors mainly include team discussions along with lack of curriculum leadership. It is also shown that experience sharing would improve students' learning as well.	Collaborative environment is significantly helpful for the teachers to ensure their learning experiences.	Yes
8	Ronfeldt, Farmer, McQueen et al. (2015)	Teacher collaboration in instructional teams and student achievement.	A survey approach	Teachers and schools, which have applied quality collaboration approaches, have shown better achievement gains through increased engagement and reflective learning.	Collaboration approaches would be helpful for the teachers to have better achievement gains.	Yes
9	Miquel and Duran (2017)	Peer Learning Network: implementing and sustaining cooperative learning by teacher collaboration.	Quantitative research design	The results identified positive effects of collaborative program on teachers' learning on attitudes and concepts. Moreover, the learning environment is also improved through developed program.	Cooperative learning within classrooms is a major benefit of applied program.	Yes

Table 1 *(continue)*

Ref #	Author Name and Year	Title of Article	Methodology	Results	Conclusive Remarks	Support of co-teaching or collaborative teaching
10	Moolenaar, Sleegers and Daly (2011)	Teaming up: Linking collaboration networks, collective efficacy, and student achievement.	Empirical evidence	Well-connected teachers or teachers, having better collaborative attitudes, have retrieved better students' achievement.	Collaborative approach is significantly helpful for the teachers to improve their students' capabilities and achievements.	Yes
11	Slavit, Kennedy, Lean et al. (2011)	Support for professional collaboration in middle school mathematics: a complex web.	Quantitative research approach	The results have shown certain characteristics, which are core for using collaborative approaches or co-teaching approaches within educational environment. Such characteristics include honest team interactions, structural and instructional support from principal, and discussion of various students' learning data.	Collaborative environment is helpful for teachers' development that would assure students' achievement.	Yes
12	Truijen et al. (2013)	What makes teacher teams in a vocational education context effective? A qualitative study of managers' view on team working.	Qualitative approach	The results have highlighted the significance of task interdependence, transformational leadership, and effective teamwork within educational the domain.	Collaborative approach or co-teaching would certainly result in the better academic achievements.	Yes

All of the selected articles in the table have clearly shown that there are significantly positive outcomes that are closely associated with the collaborative teaching or co-teaching approaches. Cooperative team teaching has been identified as a contributing factor in the responsive teaching, which in turn results in the professional development of the students. The benefits of collaborative teaching have a closer relevance to the students' achievements as well. It is identified that professional development of teachers through the implication of collaborative environment would certainly improve learning experiences of students, which in turn be helpful for the progress of educational sector.

Special Teaching Needs

The special education teachers are likely to be placed in a more subordinate role across different grade levels to address students' special issues. Datnow (2011) verified that Hargreaves' idea should be implemented, which is a better option to improve learning experiences within classrooms. Hargreaves (1994)'s idea is all about the positive and negative outcomes of collaborative teaching. Its primary focus was on the reforms related to curriculum, organization, and methods of teaching. These interventions are transformed into healthy interactions within the classroom environment. It is necessary to understand the growth and development of teachers to practice the changes within a broader culture (Luo, 2014). Therefore, it is indicated that this idea should be applied with complete

focus to gain positive educational outcomes. It is also highlighted that the mode of instructional delivery for students has changed substantially, specifically among the EFL students. Therefore, different strategies and methods have been designed to make language acquisition efficiently.

Pedagogical Implications of Collaborative Teaching

The core focus of this section is on the pedagogical implications of the collaborative teaching or co-teaching approaches within educational settings. Lin, Nix and Jeng (2017) have indicated that teachers, having in-depth collaborative and co-teaching relationships, rarely wish to return to their solitary teaching experience. This is because ESL/EFL classes would optimize successful co-teaching and collaborative environment for all students. The education field currently lacks a sufficient empirical database on the overall effectiveness of applying co-teaching approaches in general teaching classrooms (Moussu & Llurda, 2008). Similarly, lack of planning and reflection time, absence of training, refusal to change, differences in teaching methods, loss of teaching and classroom-teaching independence, personality conflicts, lack of administrative support, and fear of criticism have identified as certain limitations (Raywid, 1993).

Collaborative and co-teaching approaches have been increasingly developed to design activities for better learning, and improved comprehension of all students. The collaborative and co-teaching approaches are vital to improve students'

strengths, beliefs, and values, especially in the field of English language teaching. Another implication can be easily witnessed, for example, at the English departments in UAE universities. Non-native ESL/EFL tutor could help students to apply a similar approach in practice, which would allow them to interpret key terms in their own language through collaboration and responsive teaching. Another implication is the application of co-teaching or collaborative teaching in translation classes within ESL/EFL contexts (Wang, 2013). The specialist or the native speaker can easily teach theoretical approaches, based on the theoretical knowledge given in the first lecture.

Cooperative planning is a key factor for useful co-teaching, which is helpful for reducing miscommunication. Similarly, Keefe and Moore (2004) have shown that discussion and meetings should be conducted to reduce instances of misunderstanding, and can also help teachers to focus on the efforts. Friend (2008) has mentioned certain hindrances in co-teaching that include lack of administrative support, insufficient teacher training, ineffective communication between co-teachers, inadequate planning time and delivering instruction, lack of trust between co-teachers, and ambiguous roles. Therefore, Cushman (2013) has highlighted that a cooperative process mainly includes face-to-face interaction, positive interdependence, interpersonal skills, monitoring co-teacher progress, and individual accountability.

Co-teachers need to be trusted for better delivery of high quality instruction (Mastropieri et al., 2005). Collaborative teaching is a voluntary process, which is publicly agreed-on goals, unified decision making, joint planning, and problem solving. In a similar context, Friend and Cook (1992) have shown that mutual respect is an issue of vital importance, which enables teachers to exchange diverse ideas freely, regardless of the differences in knowledge. Time constraints presented a challenge for the teachers when they attempted to work together, which seem endemic to all teaching professionals.

On the basis of the aforementioned comprehensive theoretical support for pedagogical implications in terms of collaboration and co-teaching methods; the study supports the direction provided in the literature. Co-teaching and collaboration can be applied in ESL/EFL classes, where different traditional approaches were applied to gain maximum benefits. However, traditional approaches were not able to retrieve beneficial outcomes; therefore, co-teaching methods and collaborative teaching will be helpful for the ESL/EFL students to enhance their knowledge and abilities through responsiveness and engagement. Similarly, the study also assures that co-teaching and collaboration will be helpful for the teachers, who have faced difficulties during their teaching stuff. Lack of planning and reflection time along with personality conflicts are certain limitations that can easily be reduced through co-teaching

efforts. Similarly, loss of teaching and classroom-teaching independence can also be avoided. The rate of misunderstanding within the academic domain can easily be controlled through collaborative teaching. Meanwhile, face-to-face interaction along with positive interdependence would enhance the interactive communication among teachers, which will surely retrieve positive outcomes. Non-native ESL/EFL teachers can also improve their processes and learning patterns through co-teaching efforts. Finally, lack of trust and poor communication can be easily avoided through collaborative teaching, which would improve students' capabilities, and help them achieve better learning outcomes.

CONCLUSION

The study has mainly focused on the theoretical approaches of collaboration and co-teaching, motivational factors, pedagogical implications, and barriers. The interest of teachers in co-teaching has been intensified considerably in the majority of the educational institutions. Implementing productive co-teaching requires teachers to share and shoulder similar responsibilities in instruction and also agree to redistribute their classroom leadership responsibilities and decision making. Therefore, teachers need to divide the responsibility reciprocally.

Collaborative and co-teaching in inclusive classrooms provides students with superior academic experiences, which guarantees the prospect to access students' backing for learning. Collaboration approach for the teachers' teaching the

intellectually disabled students is also vital to accommodate different needs of students in the general education classroom. Co-teaching, is usually presented to develop curriculum and educational strategies, which has the tendency to meet diverse needs of students with and without disabilities.

An effective co-teaching program requires substantial amount of planning, communication, and support. There should be more prospects for participants to provide their feedback and responses in an interview format or open-ended answers through a survey. Future studies need to conduct empirical research in general education contexts about the value of applying them in ESL/EFL classes to optimize successful co-teaching and collaborative environment for all students. Advanced research is necessary within this context to highlight more relevant outcomes along with the suggestions, and students' interests to improve the educational sector at its core.

REFERENCES

Cushman, S. (2013). What is Co-teaching? In A., Nevin, Thousand, J., Villa, R. (Eds.). *A Guide to Co-Teaching* (pp. 3-10). CA, Thousand Oaks, USA: Corwin.

Datnow, A. (2011). Collaboration and contrived collegiality: Revisiting Hargreaves in the age of accountability. *Journal of Educational Change*, 12(2), 147-158.

De Rijdt, C., Stes, A., van der Vleuten, C., & Dochy, F. (2013). Influencing variables and moderators of transfer of learning to the workplace within the area of staff development in higher education: Research review. *Educational Research Review*, 8(1), 48-74.

Doppenberg, J. J., Bakx, A. W. E. A., & den Brok, P. J. (2012). Collaborative teacher learning in different primary school settings. *Teachers and Teaching: Theory and Practice*, *18*(5), 547-566.

Dove, M. G., & Honigsfeld, A. (2017). *Co-Teaching for English Learners: A Guide to Collaborative Planning, Instruction, Assessment, and Reflection*. CA, USA: Corwin Press.

Friend, M. (2008). *Co-teach! A manual for creating and sustaining classroom partnerships in inclusive schools*. Greensboro, NC, USA: Marilyn Friend, Inc.

Friend, M., & Cook, L. (1992). *Interactions: Collaboration skills for school professionals*. White Plains, NY, USA: Longman Publishing Group.

Gabarre, C., & Gabarre, S. (2010). Raising exposure and interactions in French through computer-supported collaborative learning. *Journal of Social Sciences & Humanities*, *18*(1), 33-34.

Gast, I., Schildkamp, K., & van der Veen, J. T. (2017). Team-Based Professional Development Interventions in Higher Education: A Systematic Review. *Review of educational research*, *87*(4), 736-767.

Griffiths, C. (2004). *Language-learning Strategies: Theory and Research*. Auckland, New Zeland: AIS St Helens, Centre for Research in International Education.

Hargreaves, A. (1994). *Changing teachers, changing times: Teachers' work and culture in the postmodern age*. New York, US: Teachers College Press.

Heldens, H. P. F., Bakx, A. W. E. A., & den Brok, P. J. (2016). Teacher educators' collaboration in subject departments. *Educational Research and Evaluation, 21*(7), 515-536.

Kaur, M. (2017). To Recognise, Realise and Differentiate the Learning Needs of Students. *Journal of Social Sciences & Humanities*, *25*(2), 503-510.

Keefe, E. B., & Moore, V. (2004). The challenge of co-teaching in inclusive classrooms at the high school level: What the teachers told us. *American Secondary Education*, *32*(3), 77-88.

Kison, S. (2012). *Motivating factors for cooperative team teaching in inclusive classrooms* (Doctoral dissertation, Humboldt State University, USA). Retrieved February 10, 2017, from http://humboldt-space.calstate.edu/bitstream/handle/2148/1027/KisonThesis.pdf?sequence=4

Lin, Y. P., Nix, J. M., & Jeng, C. C. (2017). A case study of English co-teaching in Taiwan: coordination, cooperation or collaboration? *Imperial Journal of Interdisciplinary Research*, *3*(6), 448-457.

Liu, S. H., & Tsai, H. C. (2017). Teachers' experiences of collaborating in school teaching teams. *Asian Social Science*, *13*(2), 159-168.

Luo, W. (2014). An inquiry into a collaborative model of teaching English by native English-speaking teachers and local teachers. *The Asia-Pacific Education Researcher*, *23*(3), 735-743.

Mastropieri, M. A., Scruggs, T. E., Graetz, J., Norland, J., Gardizi, W., & Mcduffie, K. (2005). Case studies in co-teaching in the content areas: Successes, failures, and challenges. *Intervention in school and clinic*, *40*(5), 260-270.

Miquel, E., & Duran, D. (2017). Peer Learning Network: Implementing and sustaining cooperative learning by teacher collaboration. *Journal of Education for Teaching*, *43*(3), 349-360.

Moolenaar, N. M., Sleegers, P. J. C. & Daly, A. J. (2011). Teaming up: Linking collaboration networks, collective efficacy, and student achievement. *Teaching and Teacher Education*, *28*(2), 251-262.

Moussu, L., & Llurda, E. (2008). Non-native English-speaking English language teachers: History and research. *Language Teaching*, *41*(3), 315-348.

Preston, J. P., & Barnes, K. E. (2017). Successful leadership in rural schools: Cultivating collaboration. *The Rural Educator*, *38*(1), 6-15.

Raywid, M. A. (1993). Finding Time for Collaboration. *Educational leadership*, *51*(1), 30-34.

Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching*. Cambridge, UK: Cambridge university press.

Ronfeldt, M., Farmer, S. O., McQueen, K., & Grissom, J. A. (2015). Teacher collaboration in instructional teams and student achievement. *American Educational Research Journal*, *52*(3), 475-514.

Slavit, D., Kennedy, A., Lean, Z., Nelson, T., & Deuel, A. (2011). Support for professional collaboration in middle school mathematics: A complex web. *Teacher Education Quarterly*, *38*(1), 113-131.

Solis, M., Vaughn, S., Swanson, E., & Mcculley, L. (2012). Collaborative models of instruction: The empirical foundations of inclusion and coteaching. *Psychology in the Schools*, *49*(5), 498-510.

Truijen, K. J. P., Sleegers, P. J. C., Meelissen, M. R. M., & Nieuwenhuis, A. F. M. (2013). What makes teacher teams in a vocational education context effective? A qualitative study of managers' view on team working. *Journal of Workplace Learning*, *25*(1), 58-73.

Wang, L. Y. (2013). Non-native EFL Teacher Trainees' Attitude towards the Recruitment of NESTs and Teacher Collaboration in Language Classrooms. *Journal of Language Teaching & Research*, *4*(1), 12-20.

Five Decades of Scientific Development on "Attachment Theory": Trends and Future Landscape

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ABSTRACT

Attachment Theory is one of the most frequently used frameworks which revolutionised the understanding of human behaviour, from early childhood to adulthood. Attachment Theory's scholarly output was examined using a quantitative bibliometric approach, based on rigorous facts extracted from the WoS databases from 1970 to 2017. Overall, 1,700 documents in the category "Psychology" with the topic "Attachment Theory" were analysed to find trends of publications, networking coupling, keywords frequencies, top authors, and highly cited papers. A qualitative content analysis of the top 20 documents with the highest average citation per year was done to provide insight on document approaches. The results show that the scientific productivity in "attachment theory" is highly skewed. The authors recommend publishing attachment theory related articles in an open access journal. There is a need for further interdisciplinary research and practice collaboration to move beyond the sole psychological approach and realise the importance of multi-disciplinary approaches.

Keywords: Attachment Theory, adult attachment, bibliometric, communication, relationship, scientific productions, top cited

INTRODUCTION

During the past seven decades, there has been a strong accent on "Attachment Theory". It has revolutionised perceptions about relationships in psychology. Attachment theory was initiated by Bowlby, Ainsworth, and colleagues in the early 1930s to characterise emotional bonds between

caregivers and children (Bretherton, 1992). The fundamental notion of attachment theory is that individuals are born with the inward psychological system (attachment behavioural system) that stimulate them to seek proximity to caring others (attachment figures) in times of need (Bowlby, 1982). "The attachment theory explains how mindful, caring, and supportive parental figures during the childhood will create and solidify children's positive mental representations of others (as competent, dependable, and well intentional), their pervasive sense of safety, security and emotions (Akhtari-Zavare & Ghanbari-Baghestan, 2010); as well as their ability to recognise, acknowledge, and regulate emotions" (Shaver, Mikulincer, Gross, Stern, & Cassidy, 2016). Ultimately, Bowlby's work created the most pervasive and strong personality development and close relationship theories that have deep impact on society, psychiatry, childcare policy (Karen, 1994; Sroufe, 1986).

A wide range of scope of study details attachment theory having a contribution in conceptualising the issues not only in psychology, but in communication, management, sociology, criminology, business, etc. In psychology, Shaver applied attachment theory on adolescents and loneliness (Rubenstein & Shaver, 1982; Shaver & Hazan, 1894; Weiss, 1973), Miculincer used attachment theory for studying helplessness, depression, combat stress reaction, post-traumatic stress disorder, and death anxiety (Mikulincer & Shaver, 2017), and Alexander applied attachment theory for the study of sexual abuse (Alexander, 1992). In communication, Fraley and Davis (1997) used attachment formation in young adulthood and romantic relationships, and Byrne (1997) used adult attachment patterns to predict various aspects of interpersonal relationships. In management, Grover and Crooker (1995) investigated the impact of providing comprehensive family-friendly policies that might have a positive impact beyond individual employees. Another work tried to develop a model to investigate the effect of social and technological factors on users' donation behaviour based on the sociotechnical system framework and attachment theory (Wan, Lu, Wang, & Zhao, 2016). In sociology, there is a study on "residents' perspectives of a world heritage site in the pitons management area, St. Lucia" (Nicholas, Thapa, & Ko, 2009). In Business, Bhattacharya and Sen (2003) used attachment theory for developing a framework for understanding consumers' relationships with companies.

Since approaching attachment theory is still in the fast growth period, especially in less developed countries, keeping up to date on the latest developments and trends can be challenging; however, bibliometrics presents a useful tool to assess the large amount of literature within the field. Bibliometrics refers to a series of procedures of evaluating the scientific production based on the number of publications, the prestige of the journal in which articles are published, and

citation of these publications (Bach, Jérome, & D'Artemare, 2011). Bibliometric studies analyse connections between derivatives of publication output and citation impact (Glanzel, 2008), assessment of scientific activities (Feng, Wang, & Ho, 2009; Zitt & Bassecoulard, 1994), countries' scholarly outputs (Etemadifard, Khaniki, Baghestan, & Akhtari-Zavare, 2018), assessment of scientific activity (He, Zhang, & Teng, 2005), and compares the relative scientific contributions of specific research area, groups, or institutions (Rosas, Kagan, Schouten, Slack, & Trochim, 2011). Bibliometrics cannot be substituted for qualitative peer evaluation. Therefore, it should be used with precaution to evaluate the scholarly outputs (Franceschini & Maisano, 2011). To support and add more insight to the results of this study, qualitative content analysis was also used for further elaboration on scholarly output in the field.

Considering "attachment theory" is one of the prominent theories in the field of psychology from the past seven decades, there are few studies that focus on the trends and landscape of its scientific production worldwide. This study addresses this gap while attempting to contribute to this effort by using the bibliometric approach to analyse diachronically the trends and presence of "attachment theory" in mainstream science journals, knowing the countries that are leaders of development of research on attachment theory, prime researchers in the world, and core science journals in issuance of attachment theory.

METHODS

The data were collected from the Web of Science Core collection (WoS) on 2017. The period of data collection was from 1970 to 2017. The six databases of WoS consist of Science Citation Index Expanded (SCI-Expanded), Social Science Citation Index (SSCI), Arts and Humanities Citation Index (A&HCI), Emerging Sources Citation Index (ESCI), Conference Proceeding Citation Index-Social Science & Humanities (CPCI-SSH), Conference Proceedings Citation Index Science (CPCI-S), Book Citation Index-Social Sciences & Humanities (BKCI-SSH), and Book Citation Index-Science (BKCI-S) were used.

The WoS comprises conference proceedings from 1990 and ESCI from 2015 in its database. The data was exclusive to the WoS category of Psychology, and the search title was TS = "attachment theory. In Table *1*, a brief table of data collection is demonstrated. Due to the above limitation, the data recovered and used for data analysis ended in 2017.

The dispensation of documents in different WoS databases were Science Citation Index Expanded (SCI-Expanded) (179), Social Science Citation Index (1,564), Conference Proceeding Citation Index-Social Science and Humanities (103), Book Citation Index-Social Sciences and Humanities (59), Emerging Sources Citation Index (53), Arts and Humanities Citation Index (26), Conference Proceedings Citation Index Science (16), and Book Citation Index-Science (10). For the field of expertise, the authors were chosen for

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analysis. For qualitative analysis, the top document was chosen relying on "Average Citation per Year" (ACPY). To identify the highly impacted document, ACPY is more precise and scientific than total citation.

Table 1
Data collection process

No	Search Term	Result
1	WC=Psychology	1,263,776
2	TS= "attachment theory"	2,603
3	#1 AND #2	1,700

RESULT AND DISCUSSION

The total number of 1700 documents were obtained from WoS in the category of "Psychology" related to "Attachment Theory", where 1558 (91.65%) were indexed as Non-Open Access (NOA) and 142 (8.35%) documents were indexed as Open Access (OA). Out of the total number of obtained documents, 1382 (81.29%) documents were "Articles" followed by 134 (7.88%) documents which were "Review", 105 (6.17%) documents which were "Proceeding Paper", 63 (3.70%) documents which were "Editorial Material", and 62 (3.64%) documents which were "Book Review". Most retrieved documents (91.06%, or 1584 documents) were in "English", followed by "Germany" with 6% (102) documents, "Spanish" 1.06%

(18) documents, and "French" 0.76% (13) documents.

The Trends of the Publications

To gain a more detailed understanding of the trend of the publications about attachment theory, the total number of related publications were analysed over the past five decades. The results of the study show that until 1990, there were less than three, which is only contributed 1% of the scientific productions related to "attachment theory" per year. As Figure 1 indicates, from 1990 until 2000, the number of scientific productions had a fluctuation rate. However, from 2010 on, there was very positive growth in publications each year, continuously.
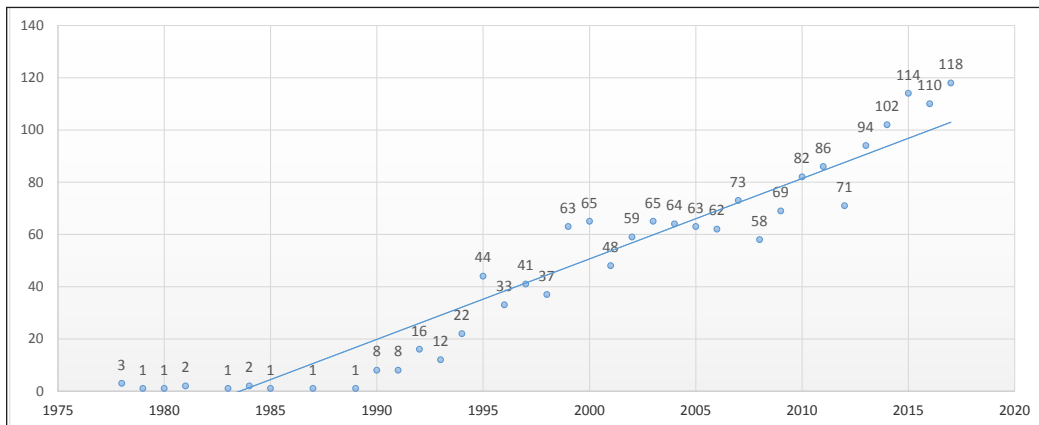
Figure 1. The trends of the publications

Top Countries and Networking

The total number of 1700 documents related to this study were investigated, from 1970 to 2017 for all countries. The results for the 10 top countries indicated that these countries contributed 1663 documents (97.82%) of all scientific production, where the United States alone contributed 873 documents (51.35%), followed by England with 178 documents (10.47%), Canada with 144 documents (8.47%), Germany with 119 documents (7%), and Israel with 112 documents (6.58%).

Figure 2 shows the world distribution of the scientific outputs based on each country's contribution in the research. A free version of StatPlanet software (https://www.statsilk.com/software/statplanet) was used in this study for creating the interactive world map and to visualise the distribution of all papers among different countries (Kalantari et al., 2017).

According to the results of the study, 56 countries were traced with at least one scientific publication in "Attachment Theory" for the duration of study. As displayed in Figure 2, the position and ranks of the countries' scientific contributions to "attachment theory" in different regions is not homogeneous. A look at the relative contribution of each region to the worldwide output in "Attachment Theory" shows that Central Asia had the most limited participation in the world aggregate, at zero. "Attachment Theory" related research within Southern Asia and Sub-Saharan African regions also is rather limited and not extensively researched. The skewness of scientific productions of "attachment theory" across the world might raise the question of whether attachment orientations are universal or variable across cultures (Ijzendoorn & Sagi, 1999) like what Turan et al. (2016) highlighted by stating that
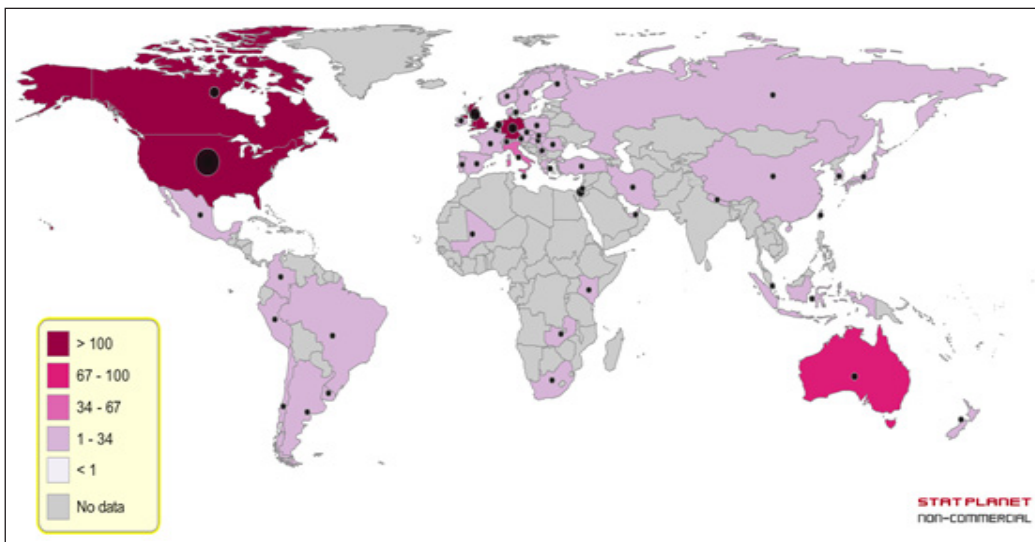
Figure 2. World distribution of the documents

"attachment" is more related to individualist cultures than collectivist cultures (Turan, Hoyt, & Erdur-Baker, 2016) in the regions such as India, Central Asia, Southern Asia and Sub-Saharan African.

The current trend of networking among the countries extracted from VOSViewer (http://www.vosviewer.com) output is based on each grouping colour code. The abbreviation "VOS" in VOSViewer stands for "visualisation of similarities" (Van Eck & Waltman, 2010). VOSViewer is a computer program that plots a relevance distance–based map and clustered keywords from text in titles and abstracts of documents (Khalil & Crawford, 2015). Figure number 3., shows countries networking as well as time dependent networking among the countries that had the highest contribution to "attachment theory" scientific outputs.
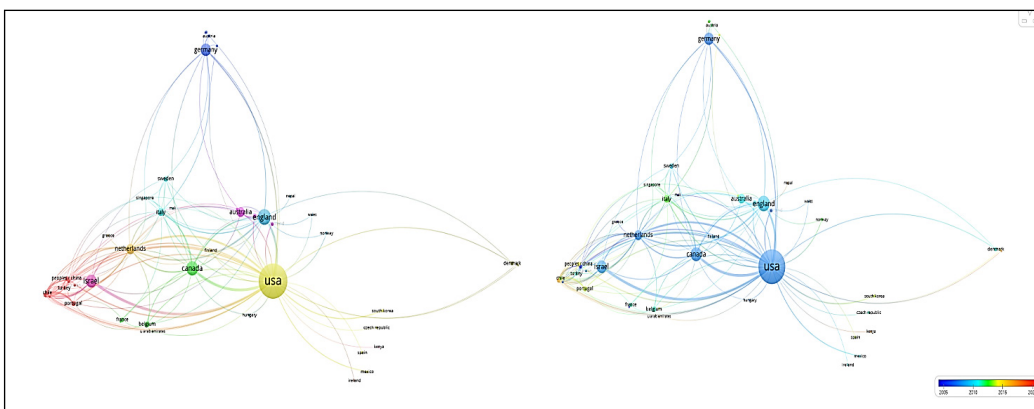
Figure 3. Countries Networking on Attachment Theory

Based on the Figure 3, the strongest networking for joint scientific production exists between the United States, England, Germany, and Israel. However, based on the Time Dependent networking (right side), a new type of networking also can be seen among newly emerging countries in this area, like Italy, Australia, China, Chili, Portugal, and Belgium.

KeyWords Plus

KeyWords Plus provides search terms extracted from the titles of documents cited in each new article in the WoS database, an independent supplement for title-words and author keywords (Dong, Xu, Luo, Cai, & Gao, 2012; Garfield, 1990; Kalantari et al., 2017). In other words, KeyWords Plus comes from the most frequent keywords of each document's references title. Therefore, analysing KeyWords Plus demonstrates the trend of the current publications based on their references. KeyWords Plus is one of the essential types of information about the published documents, which shows important research trends for monitoring the development of science (Kalantari et al., 2017). Figures 4 to 9 illustrate the top most frequently used KeyWords Plus, over the total number of 1700 documents.

Figure 4. All keywords related to Attachment Theory

As it can be seen, "Adult attachment" and "Behavior" is the higest keyword being used in related to "attachment theory".

Figure 5. Time depended keywords related to Attachment Theory

As it can be seen, "adult attachment" is the most emerging keywords in recent years (from 2010) while "behavior" is one of the most decreasing keywords.

Figure 6. Keywords related to "Adult Attachment"

Figure 7. Time depended keywords connected to Adult Attachment

Figures 6 and 7. The time depended keywords connected to "addult attachment" shows that "Social Suport", "Romantic Relationship", "childeren" are recent keywords and "intimat relationship", "Stress", "Representations", "Model", "Relationship Quality" and "orientation" are the emerging concepts and keywords in this area.

Figure 8. Keywords related to "Behavior"

Figure 9. Time depended keywords connected to "Behavior"

Figures 8 and 9. The time depended keywords connected to "Behavior" shows that few concepts such as "Adult Attachment" and ""Representations" are the emerging keywords, while most of the other concepts have decreasing trend in recent years.

As seen in Figures 4 to 9, there is a shift from "Attachment Theory" to "Adult Attachment" and its components, such as "Social Support", "Romantic Relationship", and "Intimate Relationship", in recent years. One likely reason for this shift might be the emergence of social media, which changes the landscape of relations among the young generations. Recently, the emergence of social media brings a new way for couples communicating with their romantic partners. Unlike previous generations, new generations have a seemingly endless variety of potential romantic and sexual partners through the social media and algorithms of their smartphones. In addition, social media has become a powerful "social intermediary", partially displacing the role of traditional "matchmakers", including family, friends, and community leaders as well as the matchmaking function once commonly performed by classified "lonely-hearts" columns and dating agencies (Hobbs, Owen, & Gerber, 2017). In other words, through social media, there is an emerging socialising pattern that facilitates intimacy and encourages romantic relationships through technology (Lin & Hsu, 2017).

Top Authors and Highly Cited Publications

The top 10 authors were selected, which in total had published 246 (14.47%) of the total 1700 documents in this study. Mikulincer

had 48 works, Shaver had 46 works, Van Ijzendoorn had 27 works, Simpson had 24 works, Fonagy had 22 works, and Rholes had 20 works; these are the most productive authors in "attachment theory" who have 20 or more works. Mikulincer and Shaver are the most productive scholars, together publishing 94 scientific documents related to attachment theory. While many of them are shared productions between Shaver and Mikulincer, they still have had highest contribution to the development of attachment theory, especially with books like "Attachment in Adulthood, Structure, Dynamics, and Change" (Mikulincer & Shaver, 2007, 2017).

For qualitative content analysis, the data were sorted according to the average citation per year, and the top 20 documents were selected for qualitative content analysis. The top 20 papers received 8,065 citations (40.10% of total citations, 20,110). The average citation per year (ACPY) varied, from the maximum 50.24 to the minimum 14.64, within the top 20 documents. Figure 10, shows the trend of the top 20 papers.
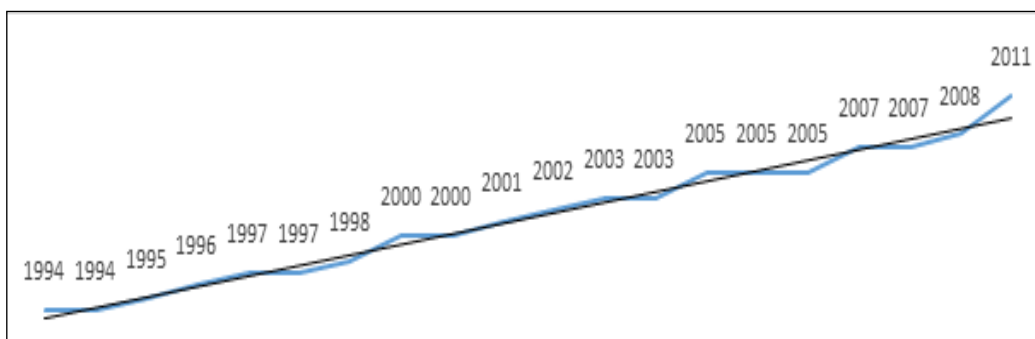
Figure 10. Trend of 20 top cited publication

Further insight can be gained from Table 2 which shows qualitative content analysis of the top 20 documents with the highest average citation per year (ACPY). According to this study, almost all 20 top cited productions were open access, with no restriction for the scientific community.

Table *2* shows the results of qualitative analysis of the top 20 documents with the highest average citation per year (ACPY). The most frequent variable of the impact of the publication was "attachment" in relation with "adult". Therefore, those publications which mainly focus on "Attachment theory" and regarding to adults' issues such as "relationship", "secure/insecure", and "avoidance/anxiety", get a substantial number of citations. On the other hand, reviews and meta-analysis documents are more likely to be cited than original research papers (Ebrahim et al., 2013). As such, the "review paper" and "meta-analysis" documents in this study appear to be a key strategy for getting more citations.

Table 2
The highest cited documents sorted based on average citations per year

NO.	Authors	Average per Year	OA/ NOP	Subject	Relation	Methodol- ogy
1	DeWolff & van Ijzendoorn (1997)	50.24	OA	Sensitivity & Attachment theory-	Parent and Child-	Meta-Analysis
2	Cook & Kenny (2005)	36.31	OA	Actor-Partner inter Dependent Model	Mother & Adolescent	Case Study
3	Mikulincer, Shaver, & Pereg (2003)	33.4	OA	Attachment theory and affect regulation	Adult relation ship	Review Paper
4	Davies & Cummings (1994)	32.5	OA	Marital conflict and child adjustment	Parent-child relation	Case study
5	Chorpita & Barlow (1998)	30.8	OA	Development of anxiety	Childhood and adult anxiety	Review Paper
6	Collins & Feeney (2000)	24.94	OA	Attachment theoretical framework on support seeking and caregiving	Couple/ adult intimate relationship	Case study
7	Waters, Merrick, Treboux, Crowell, & Albersheim (2000)	24.28	OA	Attachment security in infancy and early adulthood	Infant/early adulthood	Case study
8	Charuvastra & Cloitre (2008)	23.3	OA	Social bound and post-traumatic stress dis order	Childhood and adulthood	Review Paper
9	Dykas & Cassidy (2011)	21	OA	Attachment and the processing of social information	Childhood, adolescent and adulthood	Review Paper
10	Cicchetti & Toth (1995)	20.65	Non OA	Child abuse and neglect	child	Review Paper
11	Greenfield, Keller, Fuligni, & Maynard (2003)	20.4	OA	Cultural pathways through universal development	adolescent	Review Paper
12	Fraley (2002)	20.13	OA	Attachment stability infancy to adulthood	Infant -adulthood	Meta-Analysis
13	Campbell, Simpson, Boldry, & Kashy (2005)	20.08	OA	Perception of conflict and support in romantic relationship: the role of attachment theory	Adult/romantic relationship	Case study
14	Mickelson, Kessler, & Shaver (1997)	18.62	OA	Adult attachment	Adult attachment for extend theory	Case study
15	Mikulincer, Shaver, Gillath, & Nitzberg (2005)	18.38	OA	Attachment, caregiving and altruism	Adult /altruistic helping	Review Paper
16	Mikulincer & Shaver (2007)	18.27	OA	Boosting attachment security to promote mental health, values and inter group tolerance	Loving relation	Review Paper

Table 2 *(continue)*

NO.	Authors	Average per Year	OA/ NOP	Subject	Relation	Methodol- ogy
17	Simpson, Rholes, & Phillips (1996)	17.86	Non OA	Conflict in close relationship: attachment perspective	Adult relationship/ dating /couple	Case study
18	Shields & Cicchetti (2001)	15.82	Non OA	Parental maltreatment and emotion dysregulation as risk factors for bulling and victimization	Midle childhood	Case study
19	Cassidy & Berlin (1994)	14.88	Non OA	Insecure /ambivalent pattern of attachment	infant	Case study
20	Feldman & Ng (2007)	14.64	OA	Careers(management)	Adulr /career succed	Review Paper

The top journals who published the highest number of scientific documents related to "attachment theory" are illustrated in Figure 11. Quantity wise, journals with "Attachment Human Development" published 60 (3.52%) out of 1700 documents in the research area, followed by journals with "Infant Mental Health Journal", with 38 (2.23%) documents, and journals with "Personality and Social Psychology", with 36 (2.11%) documents. Qualitative wise, journals with Personality and Social Psychology published 5 (25.00%) documents out of the 20 top highest average citations per year (ACPY) documents.
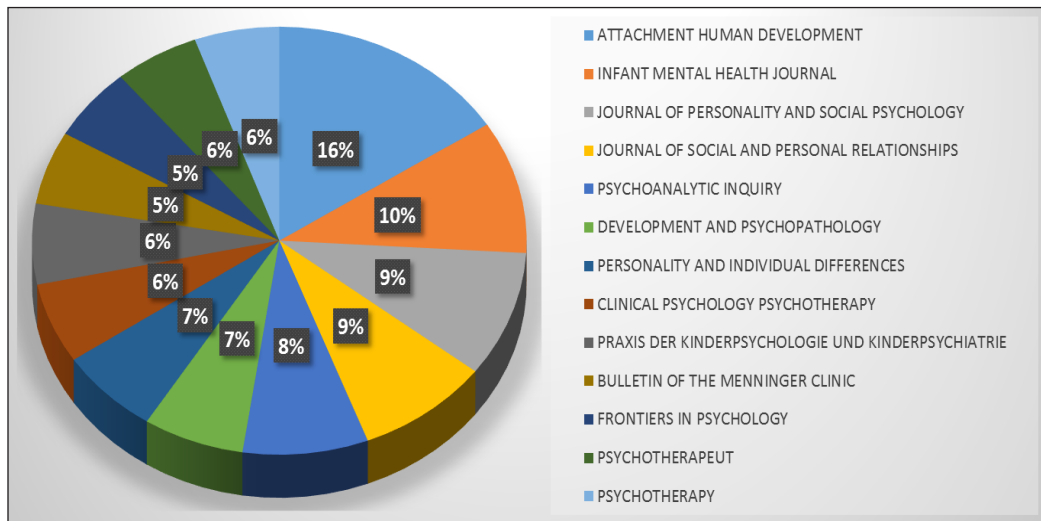
Figure 11. Top source of documents

CONCLUSION

Based on this outcome, the authors realise that attachment theory is not restricted to psychology only, and in terms of world distribution of scientific productions, much is to be desired for the development of "attachment theory". With the status of scientific outputs, the United States is the most productive country, in terms of number of publications indexed in the WoS from 1970-2017. This result shows that the scientific productivity in study is highly skewed. Even considering newly emerging countries, including Italy, Australia, China, Chili, Portugal, and Belgium, there is big question mark on the absence of many countries and regions like India, Central Asia, North and Middle Africa and Middle Eastern countries, where some of the countries in these regions such as Malaysia (Akhtari-Zavare, Ghanbari-Baghestan, Latiff, & Khaniki, 2015), and Iran (Akhtari-Zavare, Ghanbari-Baghestan, Latiff, Matinnia, & Hoseini, 2014). had many research developments in other related areas. This implies that despite worldwide usage of attachment theory, developing countries had less participation and contribution to the development of attachment theory.

The outcome of qualitative content analysis of the study demonstrates that even though publications with focuses mainly on concepts and keywords, like "attachment" in relation with "adult" and "infant-parent relationship", will get a considerable number of citations. Yet research in attachment theory needs to be encouraged to concentrate on newly emerging concepts and keywords, including "adult attachment", "orientation", "intimate relationship", and "romantic relation".

The study shows that attachment theory is a multidisciplinary approach that is not restricted to psychology. The more insights that come from different disciplines, the more comprehensive the study will be. This result suggests the need for further interdisciplinary research and practice collaboration, and will guide researchers to move beyond the sole psychological approach and realise the importance of multi-disciplinary approaches.

REFERENCES

Akhtari-Zavare, M., & Ghanbari-Baghestan, A. (2010). Iranian student's emotion in government university in Malaysia. *Global Journal of Health Science, 2(2).*

Akhtari-Zavare, M., Ghanbari-Baghestan, A., Latiff, L. A., & Khaniki, H. (2015). Breast cancer prevention information seeking behavior and interest on cell phone and text use: a cross-sectional study in Malaysia. *Asian Pacific Journal of Cancer Prevention, 16*(4), 1337-1341. doi:10.7314/APJCP.2015.16.4.1337

Akhtari-Zavare, M., Ghanbari-Baghestan, A., Latiff, L. A., Matinnia, N., & Hoseini, M. (2014). Knowledge of breast cancer and breast self-examination practice among Iranian women in Hamedan, Iran. *Asian Pacific Journal of Cancer Prevention, 15*(16), 6531-6534. doi:10.7314/APJCP.2014.15.16.6531

Alexander, F. E. (1992). The differential effect of abuse characteristics aand attachment in the prediction of long-term effect of sexual abuse. *Journal of Interpersonal Violence,* (8), 346-362.

Bach, J.-F., Jérome, D., & D'Artemare, B. (2011). *On the proper use of bibliometrics to evaluate individual researchers* (No. hal-00604136).

Bhattacharya, C. B., & Sen, S. (2003). Consumer-company identification: A framework for understanding consumers' relationships with companies. *Journal of marketing, 67*(2), 76-88.

Bowlby, J. (1982). *Attachment and Loss: Vol. 1. Loss.* Nueva York: Basic Books.

Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental psychology, 28*(5), 759.

Byrne, D. (1997). An overview (and underview) of research and theory within the attraction paradigm. *Journal of Social and Personal Relationships, 14*(3), 417-431.

Campbell, L., Simpson, J. A., Boldry, J., & Kashy, D. A. (2005). Perceptions of conflict and support in romantic relationships: The role of attachment anxiety. *Journal of Personality and Social Psychology, 88*(3), 510-531. doi:10.1037/0022-3514.88.3.510

Cassidy, J., & Berlin, L. J. (1994). The insecure ambivalent pattern of attachment - theory and research. *Child Development, 65*(4), 971-991. doi:10.2307/1131298

Charuvastra, A., & Cloitre, M. (2008). Social bonds and posttraumatic stress disorder. *Annual Review of Psychology*, *59*, 301-328.

Chorpita, B. F., & Barlow, D. H. (1998). The development of anxiety: The role of control in the early environment. *Psychological Bulletin, 124*(1), 3-21. doi:10.1037/0033-2909.124.1.3

Cicchetti, D., & Toth, S. L. (1995). Developmental psychopathology perspective on child-abuse and neglect. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*(5), 541-565. doi:10.1097/00004583-199505000-00008

Collins, N. L., & Feeney, B. C. (2000). A safe haven: An attachment theory perspective on support seeking and caregiving in intimate relationships. *Journal of Personality and Social Psychology, 78*(6), 1053-1073. doi:10.1037//0022-3514.78.6.1053

Cook, W. L., & Kenny, D. A. (2005). The actor-partner interdependence model: A model of bidirectional effects in developmental studies. *International Journal of Behavioral Development, 29*(2), 101-109. doi:10.1080/01650250444000405

Davies, P. T., & Cummings, E. M. (1994). Marital conflict and child adjustment - an emotional security hypothesis. *Psychological Bulletin, 116*(3), 387-411. doi:10.1037/0033-2909.116.3.387

DeWolff, M. S., & van Ijzendoorn, M. H. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child Development, 68*(4), 571-591. doi:10.2307/1132107

Dong, B. S., Xu, G. Q., Luo, X., Cai, Y., & Gao, W. (2012). A bibliometric analysis of solar power research from 1991 to 2010. *Scientometrics, 93*(3), 1101-1117. doi:10.1007/s11192-012-0730-9

Dykas, M. J., & Cassidy, J. (2011). Attachment and the processing of social information across the life span: theory and evidence. *Psychological Bulletin, 137*(1), 19-46. doi:10.1037/a0021367

Ebrahim, N. A., Salehi, H., Embi, M. A., Tanha, F. H., Gholizadeh, H., Motahar, S. M., & Ordi, A. (2013). Effective strategies for increasing citation frequency. *International Education Studies, 6*(11), 93-99. doi:10.5539/ies.v6n11p93

Feldman, D. C., & Ng, T. W. H. (2007). Careers: mobility, embeddedness, and success. *Journal of Management, 33*(3), 350-377. doi:10.1177/0149206307300815

Fraley, R. C. (2002). Attachment stability from infancy to adulthood: meta-analysis and dynamic modeling of developmental mechanisms. *Personality and Social Psychology Review, 6*(2), 123-151. doi:10.1207/s15327957pspr0602_03

Fraley, R. C., & Davis, K. E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships, 4*(2), 131-144.

Franceschini, F., & Maisano, D. (2011). Regularity in the research output of individual scientists: An empirical analysis by recent bibliometric tools. *Journal of Informetrics, 5*(3), 458-468. doi:10.1016/j.joi.2011.04.004

Garfield, E. (1990). Keywords plus - ISI's breakthrough retrieval method .1. Expanding your searching power on current-contents on diskette. *Current Contents, 32*, 5-9.

Glanzel, W. (2008). On some new bibliometric applications of statistics related to the h-index. *Scientometrics, 77*(1), 187-196. doi:10.1007/s11192-007-1989-0

Greenfield, P. M., Keller, H., Fuligni, A., & Maynard, A. (2003). Cultural pathways through universal development. *Annual Review of Psychology, 54*, 461-490. doi:10.1146/annurev.psych.54.101601.145221

Grover, S. L., & Crooker, K. J. (1995). Who appreciates family-responsive human resource policies: The impact of family-friendly policies on the organizational attachment of parents and non-parents. *Personnel Psychology, 48*(2), 271-288.

He, T. W., Zhang, J. L., & Teng, L. R. (2005). Basic research in biochemistry and molecular biology in China: A bibliometric analysis. *Scientometrics, 62*(2), 249-259. doi:10.1007/s11192-005-0018-4

Hobbs, M., Owen, S., & Gerber, L. (2017). Liquid love? Dating apps, sex, relationships and the digital transformation of intimacy. *Journal of Sociology, 53*(2), 271-284.

Kalantari, A., Kamsin, A., Kamaruddin, H. S., Ale Ebrahim, N., Gani, A., Ebrahimi, A., & Shamshirband, S. (2017). A bibliometric approach to tracking big data research trends. *Journal of Big Data, 4*(30), 1-18. doi:10.1186/s40537-017-0088-1

Karen, R. (1994). *Becoming Attached: Unfolding the Mystery of the Infant–Mother Bond and its Impact on Later Life.* New York, NY, US: Warner Books.

Khalil, G. M., & Crawford, C. A. G. (2015). A bibliometric analysis of US-based research on the behavioral risk factor surveillance system. *American Journal of Preventive Medicine, 48*(1), 50-57. doi:10.1016/j.amepre.2014.08.021

Lin, W.-C., & Hsu, Y.-C. (2017). The preference of using social media by different attachment styles for managing romantic relation. In Schatz S., Hoffman M. (Eds.), *Advances in cross-cultural decision making. Advances in Intelligent Systems and Computing* (Vol. 480). Springer, Cham.

Mikulincer, M., & Shaver, P. R. (2017). *Attachment in adulthood* (2nd ed.), *Structure, Dynamics, and Change*. NY City, NY, USA: The Guilford Press

Mickelson, K. D., Kessler, R. C., & Shaver, P. R. (1997). Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology, 73*(5), 1092-1106. doi:10.1037/0022-3514.73.5.1092

Mikulincer, M., & Shaver, P. R. (2007a). *Attachment in Adulthood: Structure, Dynamics, and Change*. New York: Guilford Press.

Mikulincer, M., & Shaver, P. R. (2007b). Boosting attachment security to promote mental health, prosocial values, and inter-group tolerance. *Psychological Inquiry, 18*(3), 139-156. doi:10.1080/10478400701512646

Mikulincer, M., Shaver, P. R., Gillath, O., & Nitzberg, R. A. (2005). Attachment, caregiving, and altruism: Boosting attachment security increases compassion and helping. *Journal of Personality and Social Psychology, 89*(5), 817-839. doi:10.1037/0022-3514.89.5.817

Mikulincer, M., Shaver, P. R., & Pereg, D. (2003). Attachment theory and affect regulation: the dynamics, development, and cognitive consequences of attachment-related strategies. *Motivation and Emotion, 27*(2), 77-102. doi:10.1023/a:1024515519160

Nicholas, L. N., Thapa, B., & Ko, Y. J. (2009). Residents'perspectives of a world heritage site: the Pitons management area, St. Lucia. *Annals of Tourism Research, 36*(3), 390-412.

Rosas, S. R., Kagan, J. M., Schouten, J. T., Slack, P. A., & Trochim, W. M. K. (2011). Evaluating research and impact: a bibliometric analysis of research by the NIH/NIAID HIV/AIDS clinical trials networks. *PLoS One, 6*(3), 12. doi:10.1371/journal.pone.0017428

Rubenstein, C., & Shaver, P. R. (1982). The experience of lonliness. In L. A. Peplau & D. Perlman.

Etemadifard, S. M., Khaniki, H., Baghestan, A. G., & Akhtari-Zavare, M. (2018). *Iran's social sciences issues in Web of Science (WoS): who said what?*. Pertanika Journal of Social Sciences and Humanities, *26*(2), 1159 - 1174.

Shaver, P., Mikulincer, M., Gross, J., Stern, J., & Cassidy, J. (2016). *A lifespan perspective on attachment and care for others: Empathy, altruism, and prosocial behavior*. In
J. Cassidy & P. R. Shaver (3rd eds.), *Handbook of attachment: theory, research, and clinical applications* (pp. 878-916). New York: Guilford Press.

Shaver, P. R., & Hazan, C. (1894). Incompatibility, loneliness, and "limerence". In *Compatible and incompatible relationships* (pp. 163-184). New York: Springer.

Shields, A., & Cicchetti, D. (2001). Parental maltreatment and emotion dysregulation as risk factors for bullying and victimization in middle childhood. *Journal of Clinical Child Psychology, 30*(3), 349-363. doi:10.1207/s15374424jccp3003_7

Simpson, J. A., Rholes, W. S., & Phillips, D. (1996). Conflict in close relationships: an attachment perspective. *Journal of Personality and Social Psychology, 71*(5), 899-914. doi:10.1037/0022-3514.71.5.899

Sroufe, L. A. (1986). Appraisal: Bowlby's contribution to psychoanalytic theory and developmental psychology; Attachment: Separation: Loss. *Journal of Child Psychology and Psychiatry, 27*(6), 841-849.

Turan, N., Hoyt, W. T., & Erdur-Baker, Ö. (2016). Gender, attachment orientations, rumination, and symptomatic distress: test of a moderated mediation model. *Personality and Individual Differences, 102*, 234-239.

Van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics, 84*(2), 523-538. doi:10.1007/s11192-009-0146-3

Van Ijzendoorn, M. H., & Sagi, A. (1999). Cross-cultural patterns of attachment: universal and contextual dimensions. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of Attachment: Theory Research and Clinical Applications içind?*. Nueva York: Guilford.

Wan, J., Lu, Y., Wang, B., & Zhao, L. (2016). How attachment influences users' willingness to donate to content creators in social media: A socio-technical systems perspective. *Information & Management, 54*(7), 837-850.

Waters, E., Merrick, S., Treboux, D., Crowell, J., & Albersheim, L. (2000). Attachment security in infancy and early adulthood: a twenty-year longitudinal study. *Child Development, 71*(3), 684-689. doi:10.1111/1467-8624.00176

Weiss, R. S. (1973). *Loneliness: The Experience of Emotional and Social Isolation.* Cambridge, MA, US: The MIT Press.

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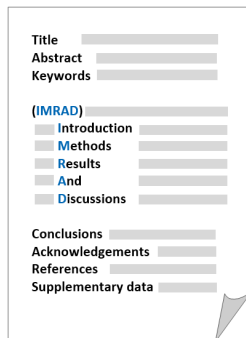
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