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Pertanika is an international peer-reviewed journal devoted to the publication of original papers, and it serves as a forum for practical approaches to improving quality in issues pertaining to tropical agriculture and its related fields. Pertanika began publication in 1978 as the Journal of Tropical Agricultural Science. In 1992, a decision was made to streamline Pertanika into three journals to meet the need for specialised journals in areas of study aligned with the interdisciplinary strengths of the university.

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Foreword

Welcome to the **Second Issue 2015** of the Journal of Social Sciences and Humanities (JSSH)!

JSSH is an open-access journal for the Social Sciences and Humanities that is 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 social science community.

This issue contains **17 articles**. The authors of these articles come from different countries, namely, **Malaysia, Bangladesh, Philippines, Iran, Indonesia, India, Thailand and Pakistan**.

The articles cover a wide range of topics from a paper analysing the welfare implications of social business with graphical approach (*Majumder, Md. Alauddin*), a study that explored the factors that contribute to satisfaction of citizens towards the criminal justice system in Malaysia (*Mohd Taufik Mohammad and Azlinda Azman*), a study on impacts of emotional intelligence and its subscales, namely, self-awareness, self-management and relationship control on work-life balance of employees' performance in educational institutions in Tamil Nadu (*Sagaya Mary, T, Vasumathi, A and Subashini, R*), an examination of Thailand's bellicosity against Cambodia between 1953 and 1962 using the expected utility theory of war initiation (*Bunyavejchewin, P.*) and a study assessing the impact of physical environment, workload and work patterns on musculoskeletal pain among migrant workers in the Malaysian manufacturing industry (*Santos, A., Ramos, H.M., Ramasamy, G. and Fernandes, C.*) to a study that examined the future of dispute avoidance procedure in the Malaysian construction industry by looking into the perceptions of the construction industry players (*Mohd Danuri, M.S., Mohd Ishan, Z., Mustaffa, N.E., Abd-Karim, S.B., Mohamed, O. and A-Rahmin, R.A.*).

The remaining articles, on topics related to language and linguistics, literature, psychology, education and media and communication, include a study on the status of interactional metadiscourse markers as prevalent interpersonal-driven features in research article abstracts (*Khedri, M., Chan, S. H. and Helen, T.*), an investigation on the level of computer anxiety and the overall attitudes of Iranian postgraduate student teachers toward using the Internet in English language classes (*Saeideh Bolandifar and Nooreen Noordin*), a study examining the effect of morphological analysis on Thai students' vocabulary-developing ability (*Jenpattarakul, W.*), a paper discussing the functions and structures of Malaysian SMS condolences (*Kuang, Ching Hei*), a study on effects of receptive and productive listening activities on the listening ability of Iranian EFL learners at different proficiency levels (*Mohammad Zareinajad, Maliheh Rezaei and Nasrin Shokrpour*), an analysis of Fromm's concept of freedom in Anthony Burgess's *A Clockwork Orange* (*Beyad, MS.*

and *Mirmasoomi, Mahshid*), an investigation into the effects of work-family conflict and socio-cognitive variables on healthy eating among Malaysian employees (*Shukri, M.*), a study on spiritual leadership values and organisational behaviour in Malaysian private institutions of higher education (*Wong, S.C., Mahmud, M.M. and Omar, F.*), a research that explored the utilization of musical mnemonics to facilitate learning of matriculation biology (*Yeoh, M. P.*), a study that identified the factors influencing the effectiveness of alliance communication in the orchid consortium of Indonesia (*Gandasari, D., Sarwoprasodjo, S., Ginting, B. and Susanto, D.*) and a paper that examined the influence and role of political talk shows in generating political awareness among Pakistan's educated youth (*Hayat, N., Juliana, A.W. and Umber, S.*).

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

I would also like to express my gratitude to all the contributors who have made this issue possible, as well as the authors, reviewers and editors for their professional contribution. Last but not least, the editorial assistance of the journal division staff is also fully appreciated.

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

Chief Executive Editor

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Social Business: A Graphical Approach to Analysing the Implications for Social Welfare

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ABSTRACT

This paper attempts to analyze the idea of social business - a brainchild of Dr. Muhammad Yunus and a very recent addition to the economic thoughts. It tries to show the welfare implications of social business with the help of graphical illustrations. It also provides an overview of the idea. Drawing upon the simple frameworks of monopoly and competitive markets, the graphical analyses show that conversion of traditional business companies into social business companies results in increased social welfare.

Keywords: Consumer surplus, Firm, Market, Producer surplus, Social business, Social welfare.

INTRODUCTION

The history of economic thought witnessed the emergence of numerous ideas pursuing the dream of eradicating poverty and hunger from the face of the earth. Robert Owens' cooperative system, Amartya Sen's Human Development Index, Muhammad Yunus' microcredit & Grameen Bank and, of late, the latter's thought of social business are significant among such ideas. Considering the present world with the feature of pervasive poverty and helplessness, any idea intended to reduce poverty assumes overriding importance. Yunus first drew significant attention from around the world by materialising his revolutionary idea of microcredit through Grameen Bank. Later on, he came up with the concept of social business - other ground breaking idea - creating a huge intellectual wave throughout the business world¹.

¹Muhammad Yunus was born in 1940 in a village named Bathua under Hathazari thana of Chittagong district in Bangladesh. He received PhD from Vanderbilt University in 1971. In the meantime, he joined Middle Tennessee State University in 1969 as an assistant professor, and worked there until 1972 before returning to Bangladesh. In 1983, he established Grameen Bank. He and Grameen Bank were jointly awarded the Nobel Peace Prize in 2006 for their landmark contributions in creating a ground for peace by uplifting the poor through providing microcredit. Besides the Nobel Prize, many other national and international prizes of diversified categories have been in his credit.

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This paper attempts to build graphical models to illustrate the welfare implications of this new business concept. To the best of my knowledge, this is the ever first attempt to illustrate the idea of social business in the form of diagrams. The importance of diagrammatising such an idea lies in the fact that graph is a very powerful and palatable tool for making a theory understandable to the general audience. It is important to note that, in general, an idea cannot be popular, and hence cannot be implemented on a large scale, until and unless it is graspable to a broad range of audience.

It is generally claimed that social business generates more welfare than traditional business does. This claim needs to be tested theoretically as well as empirically. Empirical investigation is beyond the scope of this paper. However, a theoretical investigation is possible. This paper pursues such investigation based on the above mentioned graphical analysis. Our hypothesis is that social business will be found to be welfare enhancing.

The remainder of the paper is organised as follows. Section 2 contains a very brief overview of social business. Sections 3 and 4 provide graphical illustrations of how social business firms operate under different market structures. These two sections also shed light on the welfare consequences of firms' social business motive. Finally, concluding remarks are given in Section 5.

WHAT IS SOCIAL BUSINESS ALL ABOUT?

Definition

Historically, capitalism has been misinterpreted as not having any room for entrepreneurs and investors with a motive other than profit motive. This boils down to the fact that the multidimensional nature of human being remains ignored. Essentially, capitalism is amenable to improvements. With the recognition of multifaceted desires of human beings, potential for another kind of business arises, which is termed as social business. It is a new kind of private business the goal of which is to solve social problems. A social business is not owned or operated by government (see Younus & Weber, 2007; Younus & Weber, 2010).

Social business is of two types: Type I and Type II. There is an important difference between them. Type I social business firms earn profit while Type II social business firms do not. However, profits earned from Type I social business firms are spent for solving social problems and reinvesting in new social business. This very nature implies that the welfare implications of Type I social business are much straight forward and hence do not warrant much discussion. But since the objective of Type II social business does not resemble that of the traditional business, the welfare implications of Type II social business has so far remained unexplored and hence need to be clarified.

In view of the above definition of social business, this paper attempts to discuss only the welfare implications of Type II social business. Henceforth, the term “social business” will mean Type II social business.

The Difference between Social Business and Profit Maximising Business

Unlike a profit maximising business (PMB), a social business is run on the basis of “no loss, no dividend” principle. Yunus and Weber (2007) precisely clarify the distinction between a PMB and a social business, “In its organizational structure, this new business (social business) is basically the same as the PMB. But it differs in its objectives. Like other business, it employs workers, creates goods or services, and provides this to customers for a price consistent with its objective. But its underlying objective - and the criteria by which it should be evaluated - is to create social benefits for those whose lives it touches. The company itself may earn a profit, but the investors who support it do not take any profit out of the company except recouping an amount equivalent to their original investment over a period of time. A social business is a company that is cause-driven rather than profit driven, with the potential to act as a change agent for the world.”

A social business company, however, is not a charity either. Unlike a charity, it has a full cost recovery scheme. It is only entrepreneurs’ and investors’ profits that a social business company forgoes. The sense of commerciality gives a social business company sustainability. Those non-

profit organisations and non-government organisations that rely on charitable donations are not social business companies in any sense whatsoever.

GRAPHICAL PRESENTATION OF THE MODEL: COMPETITIVE CASE

This model is intended to illustrate Yunus’ theory of social business graphically. It is a very much simplistic model based on somewhat stronger assumptions. Once the current model is built, one can try to alter the assumptions to produce other versions of the model. Among the market structures, only competitive market and monopoly market are analysed for the sake of analytical simplicity. Besides, these two market structures are often used as benchmark cases in economics. Once these benchmark cases are understood well, the analyses can be extended to other cases with much ease.

Assumptions

- i. A number of identical firms are operating in a competitive market.
- ii. The number of firms is optimal. No further entry or exit occurs.
- iii. Each firm has the same motive.

Equilibrium at the Firm Level

A social business firm sets its output at such a level that its objective (no loss, no dividend) is satisfied. That means the output decision of the firm must reflect the following:

$$\pi = TR - TC = pq - TC = 0 \tag{1}$$

$$\text{Or, } p = \frac{TC}{q} = AC, \tag{2}$$

where π , TR , TC , p , q and AC stand for profit, total revenue, total cost, price, quantity, and average cost, respectively. It is important to note that the total cost of a social business firm does not include profits. Equation [2] implies that the firm-level equilibrium output corresponds to the point of intersection between price curve and AC curve. This is the first-order condition for equilibrium in a social business setup. Fig.1 illustrates how a typical social business firm reaches equilibrium in the short run. While the upper panel of the figure presents $TR-TC$ approach, the lower panel presents price- AC approach. Two output levels, q' and q^* , appear to satisfy the first-order condition $p=AC$ (equivalently $TR=TC$). Given the two

levels of production consistent with a certain price, the firm owner can be supposed to be generous enough to select larger one, q^* in this case. Thus, the second-order condition can be stated as follows: quantity produced would be the largest among the levels of quantity at which $p=AC$.

For comparison purposes, the short-run equilibrium of a traditional firm is also shown in Fig.1. Based on marginalism, the traditional firm decides to produce q'' to maximise profit. At this output level, the distance between TC and TR is maximum (upper panel) and the criterion $MR=MC$ holds (not shown to keep the figure simple).

It appears that a social business firm produces more than a traditional firm. This is because a social business firm attains equilibrium on the basis of AC curve. MC curve loses relevance in its decision making procedure. So this curve no longer represents

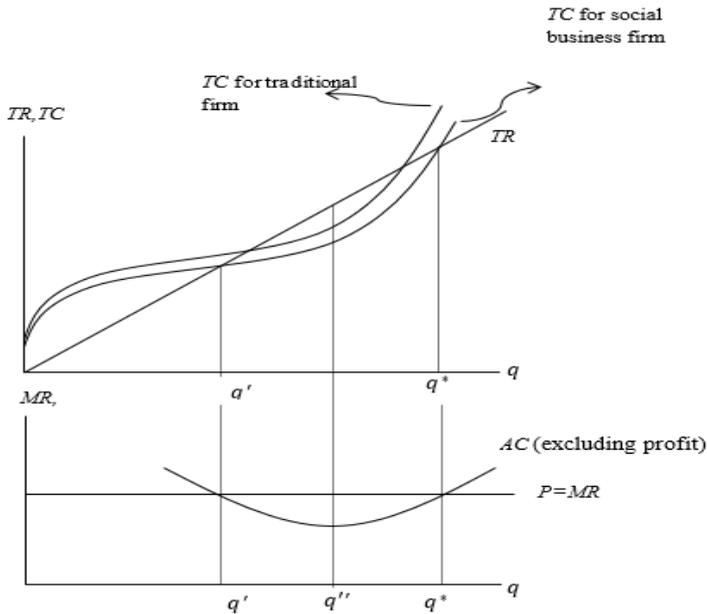


Fig.1: Equilibrium of a social business firm: competitive case

the supply behaviour of a firm. Rather, the upward portion of AC curve serves as a firm-level supply curve. The intuition is that as firms are not profit seekers, they produce in such a way that just the cost is recovered.

Industry Equilibrium

To facilitate understanding, let me suppose that initially price and quantity are determined by the traditional market principle - the equality between quantity demanded and quantity supplied in the market level and the equality between marginal revenue (MR) and marginal cost (MC) in the firm level. Fig.2 illustrates the equilibrium of a market with two representative firms (to keep illustration simple, only two firms are considered). Table 1 summarises the

equilibrium situation when the firms follow the traditional market principle.

Now, suppose the participating firms decide to run their business on the basis of social business motive. That means, entrepreneurs and investors will not receive any profit. As a result of this transition, firms' AC curves shift downward by the amount of foregone profit. As explained in Section 4.2, under the new circumstances, upward portion of AC curve represents the supply behaviour of a firm. Therefore, the market supply curve can be found by horizontally adding together the upward portions of the AC curves. Accordingly, the market supply curve $\Sigma AC'$ in Fig.2 is derived by taking horizontal summation of the upward portions of firms' "no loss no dividend" AC curves - AC_1' and AC_2' .

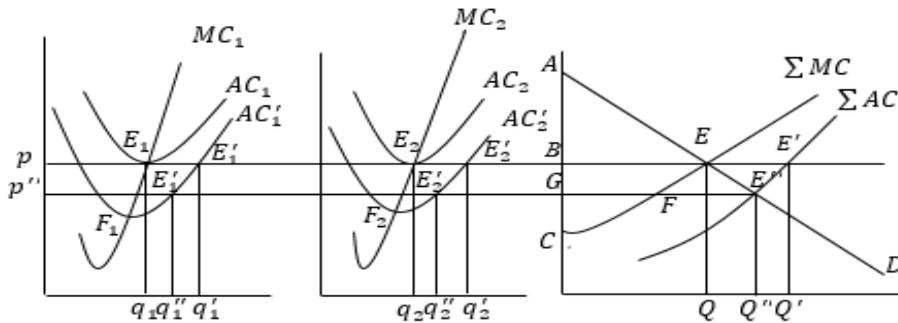


Fig.2: Market equilibrium in a social business framework: competitive case

TABLE 1
Equilibrium situation when firms operate under the traditional framework: competitive case

	Equilibrium point	Output	Price	Profit /unit	Supply curve ²
Firm-1	E_1	q_1	p	$E_1 F_1$	MC_1
Firm-2	E_2	q_2	p	$E_2 F_2$	MC_2
Market	E	Q	p	Weighted average of the above	ΣMC

Source: Fig.2

²The portion of MC curve which remains above AVC curve is considered as the supply curve of a traditional firm.

The new market price is determined at p'' by the intersection of the market demand curve D and the new market supply curve $\Sigma AC'$. The firms take this price as given and equate it with the new average cost to reach equilibrium at q_1'' and q_2'' , respectively. The new equilibrium market quantity is $Q'' (=q_1'' + q_2'')$.

Equilibrium Mechanism

As clearly shown in Fig.2, once the firms decide to act on the social business motive, they begin to produce a total of $Q' (=q_1' + q_2')$ at the prevailing price p to satisfy the criterion price=average cost. As a result, the market experiences an oversupply amounting to QQ' , which causes market price to decrease. With the decrease in price, the firms adjust their production in accordance with the equilibrium criterion. The falling trends in price and quantity

prevail until a new market equilibrium E'' is reached. At this new equilibrium, price is equal to average cost (excluding profit) in the firm level and market demand becomes exactly equal to market supply. Table 2 provides a summary of the equilibrium situation when the firms decide to pursue the social business motive.

Welfare Implications

As shown in Fig.2, there are changes in the welfare situation as a consequence of the firms being converted into social business companies. These changes are summarised in Table 3. It appears from this table that once the firms make a transition from the profit motive to the social business motive, the consumer surplus necessarily increases. Meanwhile, the producer surplus declines to zero. However, it is quite ambiguous whether the total welfare increases or

TABLE 2
Equilibrium situation when firms operate under the social business framework: competitive case

	Equilibrium point	Output	Price	Profit /unit	Supply curve
Firm-1	E_1''	q_1''	p''	0	AC_1'
Firm-2	E_2''	q_2''	p''	0	AC_2'
Market	E''	Q''	p''	0	$\Sigma AC' = AC_1' + AC_2'$

Source: Fig.2

TABLE 3
Changes in welfare due to the conversion of firms into social business companies: competitive case

	Under profit motive	Under social business motive	Change
Consumer surplus	ABE	AGE''	Increases by $BGE''E$
Producer surplus	BCE	0	Decreases by BCE
Total surplus	ACE	AGE''	Ambiguous ³

Source: Fig.2

³Total surplus increases, decreases or remains constant if EFE'' is greater than, less than or equal to CGF .

decreases. Nevertheless, the consequence can be considered a better state, because typically consumers belong to relatively lower income groups as compared to producers.

In this particular case, the decrease in the social welfare, if there is any, emanates from the decrease in the welfare from the producers' side. This decline in the producers' welfare can be accepted on the ground that the producers willingly forego their surpluses and obtain some sort of mental satisfaction in return.

What would be if the No-entry/exit Assumption is Relaxed

If the assumption of no entry/exit is relaxed, new firms will enter the market with social business motive (according to the assumption of same motive) under the circumstances described above. As a result, the market supply curve ΣAC will shift rightward, leading to a fall in market price. As long as new entry takes place, market price will continue to fall. New entry

will stop once the price becomes equal to minimum average cost. The social business motive (no loss, no dividend) does not allow the price to fall below the minimum average cost. Thus, each firm will achieve the equilibrium at the minimum point of its average cost curve.

MONOPOLY CASE

Firm's Equilibrium

Under the conventional framework, a monopolist produces complying with the decision rule $MR=MC$ to maximise his profit. In Fig.3, the equilibrium of such a monopolist is shown to be at point E_0 . The corresponding output level and price are Q_0 and p_0 , respectively. As soon as the firm converts into a social business, its average cost curve shifts down from AC_0 to AC_1 for the same reasons as those pointed out in Section 4.3. According to the objective of a social business (no loss, no dividend), MR curve no longer has any relevance in decision making process.

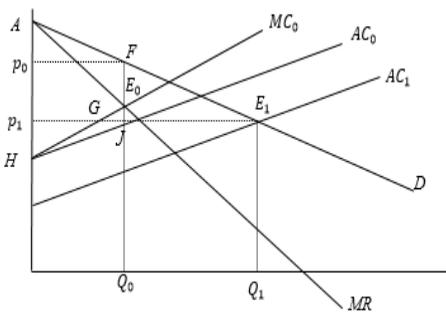


Fig.3 : Firm's equilibrium in a social business framework: monopoly case⁴

TABLE 4

Equilibrium: traditional monopolist versus social business monopolist

	Equilibrium point	Output	Price	Profit /unit
Traditional motive	E_0	Q_0	p_0	FJ
Social business motive	E_1	Q_1	p_1	0

Source: Fig. 3

⁴Since there is only one firm in a monopoly market, this is also a market equilibrium.

The output decision of the firm begins to be driven by the equality between price and average cost. Fig.3 shows that under the new circumstances, output and price are determined at Q_1 and p_1 , respectively. Table 4 presents a comparison between the equilibrium of a traditional monopolist and that of a social business monopolist.

It is important to note that the cost curves in Fig.3 are drawn using straight line to keep the diagram simple. Unnecessary complication seems to arise in illustrating consumer surplus and producer surplus if U-shaped curves are used. In fact, it can be shown that using straight lines does not alter what can be found using U-shaped curves.

Welfare Implications

Table 5 summarises the welfare implications of the decision of a monopolistic firm to convert into social business. After the conversion, the firm forgoes the producer surplus $HE_0 Fp_0$ as well as normal profit. On the other hand, the consumer surplus obviously increases from $Ap_0 F$ to $Ap_1 E_1$ by an amount of $p_0 p_1 E_1 F$. In this case also, it is quite ambiguous whether the total welfare increases or decreases. However, the situation can be considered an improvement regardless, because the consumers, who are mainly from the lower income groups,

are now surely better off. In addition, as argued earlier, any decrease in the total social welfare comes from the producer’s side. Since the producer forgoes his surplus voluntarily, this decrease should not be seen as a welfare loss. The reason is that personally, the producer does not feel any dissatisfaction due to the surplus reduction.

CONCLUDING REMARKS

Yunus unfolded a new dimensionality in the domain of capitalism by propounding the social business concept. Instead of limiting himself merely to the theory, he went beyond to materialise the idea. At least five companies that are currently in operation in Bangladesh have been established as social business companies under his direct supervision and management. They are Grameen Danone, Grameen Veolia, BASF Grameen, Grameen Intel, and Grameen GC Eye Care Hospital. These companies are producing yogurt, water, mosquito nets, IT products, and eye care services, respectively.

This paper tries to figure out the welfare implications of the social business concept using graphical tools. The analysis reveals that as far as social welfare is concerned, social business companies do much better than traditional business companies. However, ambiguity remains

TABLE 5
Changes in welfare due to the conversion of a traditional monopolist into a social business monopolist

	Under profit motive	Under social business motive	Change
Consumer surplus	$Ap_0 F$	$Ap_1 E_1$	Increases by $p_0 p_1 E_1 F$
Producer surplus	$HE_0 Fp_0$	0	Decreases by $HE_0 Fp_0$
Social welfare	$AFE_0 H$	$Ap_1 E_1$	Ambiguous

if the losses of entrepreneurs and investors are considered losses as such. Nonetheless, since entrepreneurs and investors in the social business world convert their motives willingly, the losses can be supposed not to generate any disutility or negative welfare. In that sense, our conclusion about the welfare effects of social business is compelling.

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Surveying Citizen Satisfaction with the Criminal Justice System in Malaysia

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ABSTRACT

Models of the criminal justice system have developed from focusing on the traditional role of the system to acknowledging the position of the victims. The latter recognises that victims' insights are important in determining if a system functions effectively. The objective of this study is to explore what entails satisfaction of citizens towards the criminal justice system. The current study employed a survey method to ask 166 Malaysian respondents to list down what services should be offered and demeanours shown by criminal justice personnel (i.e. police, court personnel) in order for them to be satisfied with the system. The responses were analysed according to themes that were both specific to the sample of the study and parallel to the variables discussed in the literature to check for universality. The findings compiled 12 satisfaction components that were consistent with the ones presented in the literature and 11 components that were specific to the sample used in this study. Implications of this study include highlighting that satisfaction is not one-dimensional, but based on patterns.

Keywords: Criminal justice system, victim satisfaction

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INTRODUCTION

There are numerous reasons for the long-standing establishment of criminal justice systems around the world. Various models have been designed to explain why and how criminal justice systems work. Among the earlier models that focused on the traditional role of the criminal justice system was Packer's (1964) Crime Control model,

which asserted that the criminal justice system was there to help suppress criminal activities. In the same article, Packer proposed that another role of the criminal justice system was shown in his second model, the Due Process model that argued that the criminal justice system should deal with offenders just as the standard “orders” did. Both models had an emphasis on crime and offenders. If a criminal justice system worked properly, then crime rates could be reduced. While these models had a good foundation in describing how a criminal justice system worked, it lacked an emphasis on victim’s rights.

To close the gap, Stickles (2008) proposed a new model that acknowledged victims in the processes of the criminal justice system while maintaining the latter’s role in matters pertaining to crime and offenders. The model, named the Victim Satisfaction model, described a criminal justice system in which victims could have a safe platform from which to exercise their rights after being victimised. This model suggested that in order to ensure victims’ satisfaction in undergoing the criminal justice process, three components needs to be fulfilled:

1. Victims of crimes needs to be sure that they did have a role in the criminal justice system, just as they would in a civil court.
2. The prosecutor needs to assume the responsibility to defend a victim’s rights and ensure that the victim’s needs were fulfilled.

3. The criminal justice system has to make it a priority to satisfy victims’ interests.

These components, however, have a strong emphasis on the processes of court. A typical criminal justice system of the modern world has three components: 1) the police, 2) the court and 3) the corrections body (May, Minor, Ruddell, & Matthews, 2007). The moment a person is victimised and he or she decides to make a police report, he/she will be involved with, at the very least, the police. In court, however, victims usually are there mainly as eyewitnesses (Mahmud & Ruslan, 2011).

When facing a police officer, the victim will have to give his or her account of the victimisation. At this stage, the police’s demeanour and services are important and become a component of victims’ satisfaction. When and if the case is brought up to court, the victims will have to give their testimony as part of the evidence against the offender. In prison, however, it is mainly the offenders who are involved while the victims’ role usually ends after the testimony process in court. Because of this, and also because of the fact that victims are slowly being recognised in the criminal justice system, assessing satisfaction of victims with the whole process is pertinent. Most literature on victim satisfaction focuses on the satisfaction when dealing with the police (e.g. Tewksbury & West, 2001; Myhill & Upton, 2007), and the criminal justice system in general (e.g. Hotaling & Buzawa, 2003; Stickels, 2008).

Importance of Measuring Victims' Satisfaction

The evolution from Packer's (1964) legally oriented model and the fixation on the traditional role of the criminal justice system to the call for the recognition of victims' role by various academicians and professionals was one of the reasons why victim satisfaction became an important criterion for an effective system. One of the main arguments for victims' role was that crimes were more of a transgression against an individual, rather than against the legal system or society (Zehr & Gohar, 2002; Stickels, 2008). Moreover, the impact of the criminal justice process on victims can influence their reporting behaviours (Hotaling & Buzawa, 2003). This is due to the after-arrest event where the victims quickly realise that they are losing control of the case. If victims feel dissatisfied with the criminal justice process, it could be because the system is ignoring the main component and actor in a criminal event, which is the victim him/herself. In addition, police demeanour could also have an impact on victims' reporting behaviour (Tewksbury & West, 2001), especially in the case of repeat victims (van Dijk, 2001).

Reporting behaviour can also be related to satisfaction with the police. A number of studies have done satisfaction studies with victims of crime on their working with the police (e.g. Tewksbury & West, 2001; Myhill & Upson, 2007). Police officers do not work alone. They have to rely on the community to be their "eyes" so that if a crime is about to happen, or is happening,

then members of the community could take the initiative to call the local police station. However, this cooperation can be influenced by the community's sense of satisfaction with the police in the first place. If members of a particular community do not feel as if the police have done a satisfactory job, they might hesitate to take any action, allowing a crime to be perpetrated.

Rape cases are claimed to be one of the least reported crimes (Rahman, Z. A., Stapa, Z., Omar, M., Long, A., Badaruddin, F., Awang, J., *et al.*, 2011). Some have argued that rape victims feel too deep a sense of violation and humiliation to report the rape to police. However, it could also be that their reluctance to make a police report might actually be due to the demeanour of officers handling the case. An example of this was recorded when one of two officers who were handling a rape case involving a small girl stated, "You listen to her story if you want, I'm bored" (Oswin, 2012). Regardless of whether the victim had heard what he said or not, making such a statement reflected directly on the quality of his integrity, and it is this that affects victim satisfaction.

One might argue that the criminal justice system actually helps to satisfy a victim's feeling of wanting to take revenge. While logically in every criminal event, the victim is likely to experience this feeling, to assume that punishing the perpetrator can mitigate the feeling is without proper foundation. In his study, Orth (2004) found that while wanting to take revenge was felt, what seemed to mitigate the feeling was financial compensation for the loss

inflicted by the crime. However, in spite of the financial compensation, emotional and psychological turmoil caused by the crime still remained.

In another study, victims' feeling of wanting to take revenge was classified into two: 1) comparative suffering i.e. when the victims wanted the same thing to happen to the perpetrator, and 2) the understanding hypothesis i.e. in wanting revenge to make the perpetrator understand how the crime had affected the victim (Gollwitzer, Meder, & Schmitt, 2011). The researchers found that victims felt more satisfied when they knew that the offender understood that the victims were negatively affected by the crime, which is what recognition of victims' rights is, rather than that the offender should suffer in the same way, which is mostly a traditional view of criminal justice.

Even with the traditional model of the criminal justice system that is offender-oriented, the criminal justice system cannot deny the fact that there is a good chance that a person has been victimised. It has been argued that the effectiveness of a criminal justice system is measured through its accountability in handling a criminal case (Doak, 2011). This accountability, then, can be reflected through the satisfaction felt by the victim of the crime. An approach to the criminal justice system, Restorative Justice (RJ), is known to bring forward victims of crime in its processes. It has been found that accountability in RJ has been rated to be higher, allowing the victim to feel more satisfied with the overall processes (Poulson, 2003).

Another importance of measuring victim satisfaction is the notion that a victim's depth of satisfaction can show the psychological state of the victim (Gromet, Okimoto, Wenzel, & Darley, 2012). While focusing on punishing the offender can be costly, to bring forward victims, which is one of the ways to enhance satisfaction, in the criminal justice processes can actually change the course of criminal justice. Moreover, victim satisfaction can influence the punitive decision making of a third-party, especially when the satisfaction is informational to the victim's psychological state and the seriousness of the offence committed by the offender.

Components of Measurement for Satisfaction

The literature presented various variables that were used to indicate if a victim was satisfied with the criminal justice system. Table 1 shows a list of variables used in several studies to measure the satisfaction of victims of crime towards the police and the criminal justice system. Only empirical papers above the year 2000 were considered. This was not a meta-analysis, rather a preliminary set of categories of variables to measure when assessing satisfaction of crime victims towards a third party.

Orth (2004) and Gollwitzer, Meder and Schmitt (2011) in their studies did not explicitly assume the target of satisfaction (i.e. police and/or the criminal justice system), but only measured the satisfaction factors based on personal feelings of the victims i.e. wanting to take revenge. On the

other hand, for other studies mentioned in Table 1, “satisfaction” is used to indicate the objectives of the research. However, the components of “satisfaction” varied across these studies. Components used by Tewksbury and West (2001) are similar to the components used by Robinson and Stroshine (2005), except that the latter also added “seriousness,” “understanding” and “listening.”

There were also components that were used by only one study cited in this correct study. “Asking about fears of future crime” was only used as a component by Myhill and Upson (2007), “effects of the criminal justice system,” “the gap between victim preferences and criminal justice action” and “characteristics of the study incidents” were only used by Hotaling and Buzawa (2003), while “helpfulness” was only used by Tewksbury and West (2001) and “respect” by the Metropolitan Police Department of the District of Columbia (2002).

Wu, Sun and Triplett (2009) did not use characteristics of the criminal justice personnel, but used rather the demographic background of the victims to see if different crime-related history, classes and neighborhood characteristics had any effects on the satisfaction level towards the system. This brought up the importance of including demographic data in studies of victim satisfaction, which the current study employed. This current research did not list all the components, rather only the ones highlighted by the authors in the literature as being useful in measuring satisfaction.

It can be seen from the list that basically,

the variables of the previous studies can be divided into three groups: 1) the demographic and personal background (e.g. age, gender, class, history of victimisation etc.), 2) the technical aspects of dealing with the police and the criminal justice system (e.g. making an arrest, assuring confidentiality etc.), and 3) the demeanour shown by the third party (e.g. courtesy, helpfulness etc.). By demographic background, the author/s of a particular study highlighted the importance of measuring the satisfaction shown by the victims of crime. Orth’s (2004) study, for example, regarded demographic background in categorising the sample in the research, but it was not a significant variable in the data analysis. Therefore, demographic background was not an important variable in his study as shown in the list.

THE OBJECTIVES OF THIS STUDY

This study, then, aimed to compile the components of satisfaction with the criminal justice system by Malaysians and sought to explore:

1. What components were consistent with the ones presented in the literature and,
2. What components were specific to the sample of this study.

TABLE 1
 Components of “Satisfaction” Used By Past Studies to Measure Victim Satisfaction with the Criminal Justice System

Variables	Tewksbury & West, 2001	Metropolitan Police Department of the District of Columbia, 2002	Hotaling & Buzawa, 2003	Orth, 2004	Robinson & Strohshine, 2005	Myhill & Upson, 2007	Wu, Sun & Triplett, 2009	Gollwitzer, Meder & Schmitt, 2011
Interest/Taking situation seriously					/	/		
Information-related		/				/		
Response time	/				/	/		
Asking about fears for further crime						/		
History of offending and victimisation		/	/				/	
Continued on next page								
Effects of criminal justice system contact (what the police and legal professionals do to help victims)			/					
The gap between victim preferences and criminal justice action			/					
Characteristics of the study incident (i.e. nature of the crime and victimisation)			/					
Courtesy	/				/			
Concern	/	/			/			

TABLE 1 (Cont.)

Understanding			/
Listening carefully	/		/
Helpfulness	/		
Revenge		/	/
Class	/		/
Neighbourhood characteristics			/
Respect	/		
Service provision in special knowledge and skills area -arresting -arranging transportation -arranging other services -speaking to victim and perpetrator separately -etc.	/		
Assuring confidentiality and privacy	/		
Perception on safety	/		
Overall satisfaction	/	/	/

METHOD

Sample

The sample of this study consisted of any Malaysian above the age of 18. Convenience sampling method was used to collect the data. The respondents comprised of Malaysians from different professional and socio-economic background including students, professors, janitors and housewives. Table 2 shows the distribution of the respondents in terms of their age group, race and hometown state. A total of 166 respondents participated in this survey. The youngest respondent was 18 years old and the oldest respondent was 64 years old. Respondents came from all states in Malaysia. The highest number of respondents were from Penang followed by Selangor and then Perak. The “hometown state” means where the respondents were originally from. For example, if a student who answered the questionnaire studied in a university in Penang but was originally from Selangor, Selangor was indicated as the hometown. No minimum size of sample was set as the research aimed to collect the data until no new data was offered by the participants. Details of the distribution of the respondents are presented below.

Consent was obtained from all participants before the surveys. However, since this survey did not involve any sensitive population and did not involve an institution or a specific place that would require permission, it did not require permission to be granted by any parties or institutions.

TABLE 2
Distribution of Respondents

Variable		n	%
Age	18 – 27	89	53.6
	28 – 37	36	21.6
	38 – 47	22	13.2
	48 – 57	12	7.2
	58 – 64	7	4.2
	Missing	0	0
Gender	Male	66	39.7
	Female	100	60.3
	Missing	0	0
Race	Malay	92	55.4
	Chinese	41	24.7
	Indians	28	16.8
	Sikh	3	1.8
	Missing	2	1.2
Hometown state	Penang	48	28.9
	Selangor	39	23.5
	Perak	24	14.4
	Kuala Lumpur	10	6.0
	Johor	10	6.0
	Kedah	10	6.0
	Kelantan	6	3.6
	Pahang	5	3.0
	Negeri Sembilan	3	1.8
	Terengganu	3	1.8
	Sarawak	2	1.2
Perlis	2	1.2	
Sabah	1	0.6	

Design and Materials

The research was conducted face-to-face and via telephone interviews. The questionnaire contained both quantitative items, which were the demographic data and the history of victimisation/dealing with the criminal justice system. The qualitative items were also included. The questionnaire was divided into three sections:

1. The demographic data section (i.e. age, gender, socio-economic status etc.)
2. History of victimisation and history of dealing with the criminal justice system (with the police or court), if relevant to the particular respondent, and
3. Expectations of what the system should do and how it should respond to victims.

The third section was the main section to be observed. The participants were asked to list down two kinds of expectations. The first list was their expectations of

services that they should obtain from the system. Examples of the responses were “to investigate” and “to file a report”. The second list was their expectations of the demeanour that should be shown by the personnel in the system. Examples of their responses were “to be courteous” and “to be friendly”.

The lists of expectations by the respondents were then categorised according to the similarities. To do this, two academics worked together and discussed what nouns or adjectives should be separated or kept together. For example, it was agreed that the phrases “to be honest” and “to be transparent” were to be accumulated under the theme “integrity” since both phrases were the indication of a member of staff’s integrity in doing his/her job. The categories that emerged from the analysis are presented below.

TABLE 3
History of Victimisation and/or Dealing with Criminal Justice System

Variable	Responses	n	%
Have you been victimised for any crime?	Yes	105	63.2
	No	61	36.8
If yes, how many times?	1	(Out of 105) 79	75.2
	2	(Out of 105) 18	17.1
	3	(Out of 105) 6	5.7
	4	(Out of 105) 2	1.9
Have you had any experiences dealing with personnel in the criminal justice system?	Yes	113	68.0
	No	53	32.0
Overall, are you satisfied with the services given?	Yes	(Out of 113) 55	48.6
	No	(Out of 113) 58	51.4

RESULTS

Table 3 below shows the history of victimisation and/or dealing with the criminal justice system. By history, it is meant that that even if the respondents had not been victimised for any crime, he or she might have experienced dealing with criminal justice system such as reporting a crime for a family member. The crimes listed by 105 victim respondents in this survey included theft (n=54), burglary (n=19), snatch theft (n=18), sexual harassment (n=4), physical harassment (n=3), hit-and-run (n=2) and defamation (n=2). The rest (n=3) did not disclose the information.

Figure 1 and Figure 2 show the frequency of responses related to the respondents' expectations of services that should be delivered by personnel in the criminal justice system and the demeanour that should be shown by them sorted by race. Figure 3 and 4 show the frequency sorted by gender. Figure 5 and 6, on the other hand, show the frequency in general.

In general, "speedy services" (n=110) was the service most mentioned by the respondents as being what they expected from the criminal justice system. It is followed by "investigation" (n=62) and "general expectations" (n=56). On the other hand, the least mentioned service was "technology" (n=3), followed by "religious aspect of services" (n=4) and "communication skills" (n=9). A sizeable number of respondents also mentioned "victim-related services" (n=40), "patrol and field-related services" (n=32) and "arrest" (n=26).

Meanwhile, for expected demeanour, "friendliness" (n=91), "fairness" (n=78) and "integrity" (n=74) were the top three most mentioned. "Physical aspect" (n=1), "exemplariness" (n=2) and "readiness" (n=4) were the least expected demeanour shown by personnel of the criminal justice system.

Malay and female respondents were the highest demographics in this survey. Therefore, it was not surprising that Malay respondents had the highest frequency for each variable in the expected services to be offered by the criminal justice system personnel. However, even though there were more female than male respondents, it is interesting to note that male respondents had the higher frequency for "filing a report" (n=17), "technology" (n= 2) and "therapeutic services" (n=9).

However, for demeanour expected to be shown by the personnel, the Malay demographic had a lower frequency for "responsibility" (n=14), with the Chinese demographic having the highest (n=19). On the other hand, male respondents had a higher frequency of reporting "humility" (n=2), "readiness" (n=3) and "firmness" (n=12) than their female counterparts.

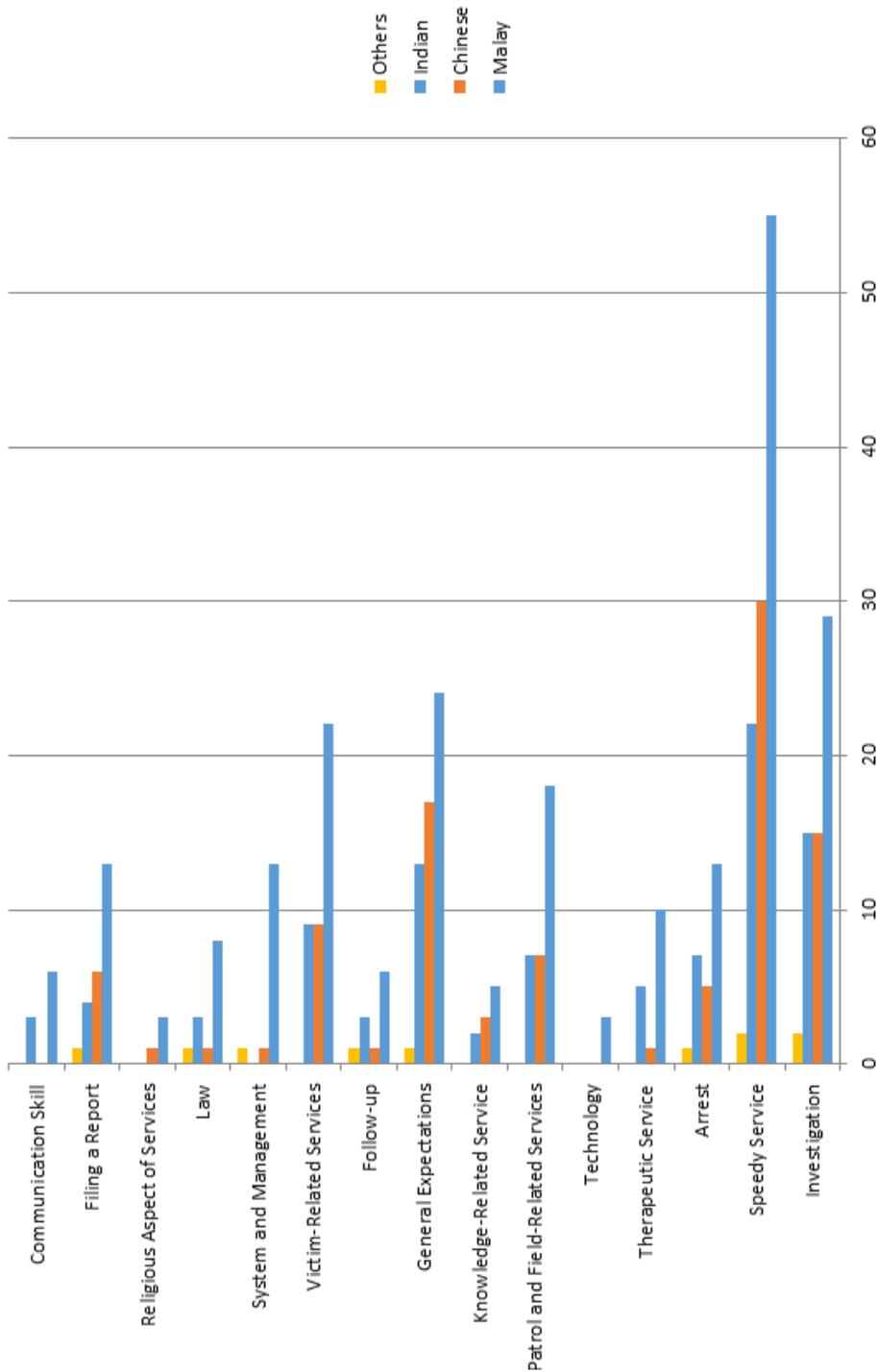


Fig.1 – Frequency of responses for expected services by race

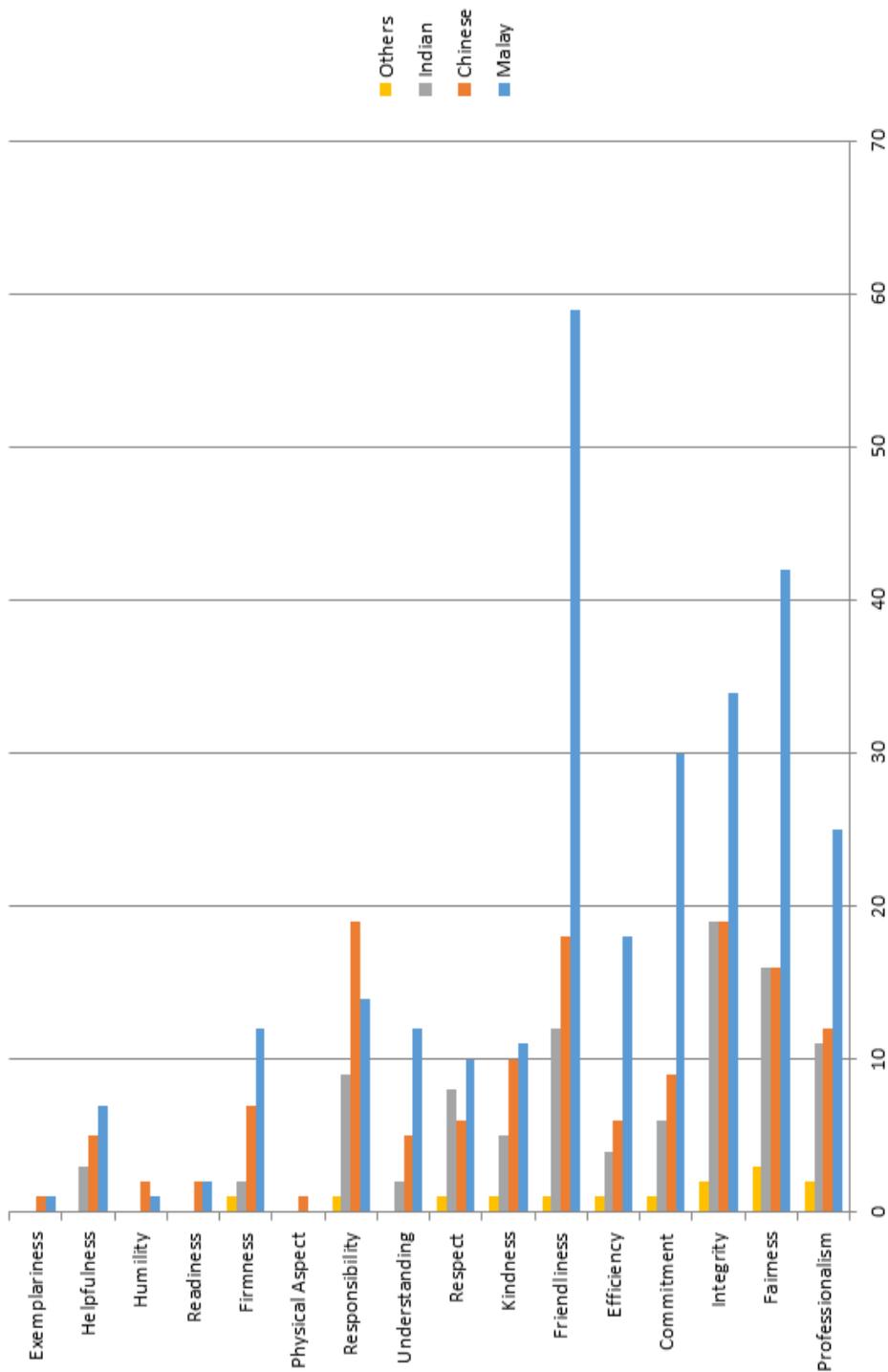


Fig.2: Frequency of responses for expected demeanour by race

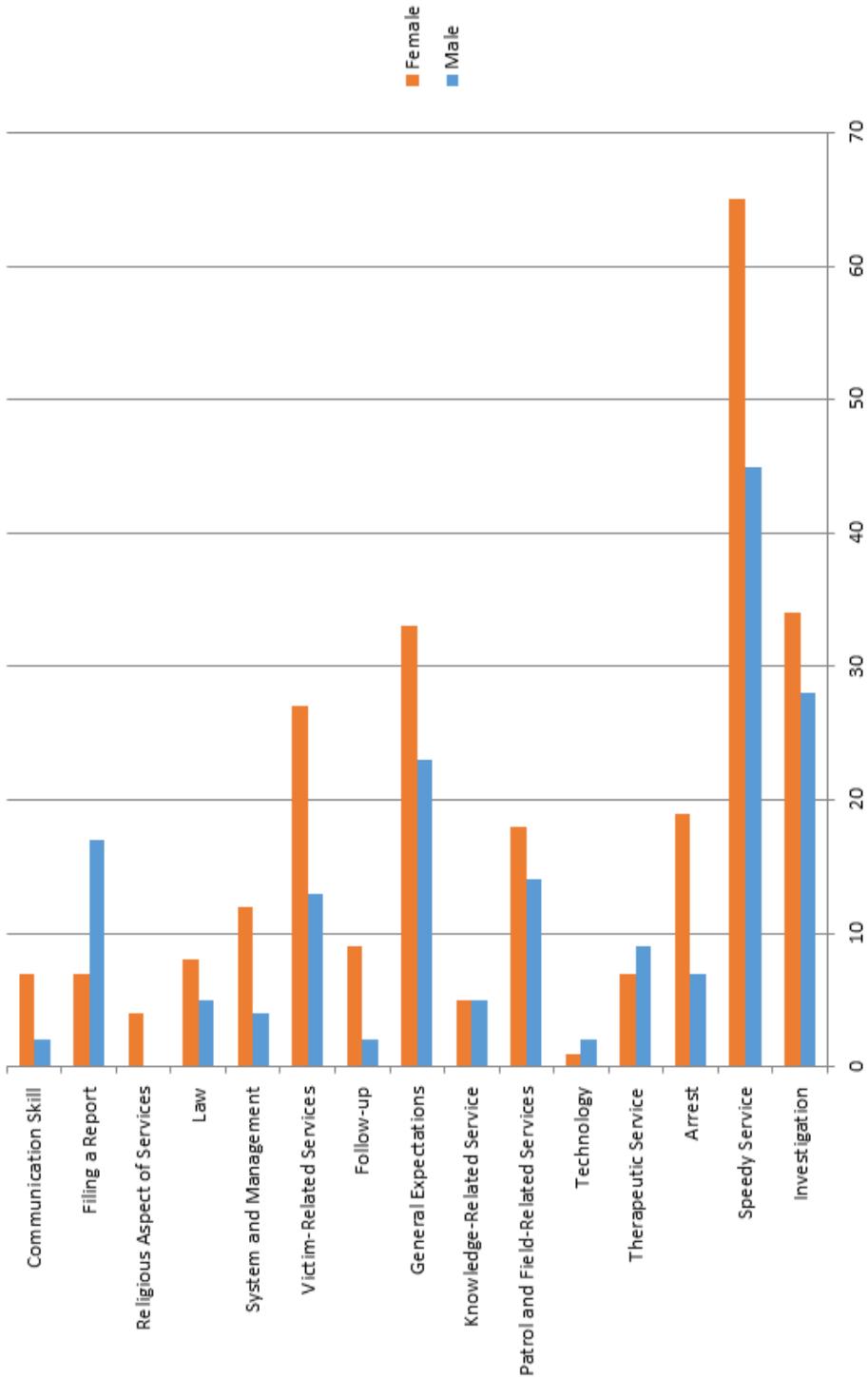


Fig.3: Frequency of responses for expected services by gender

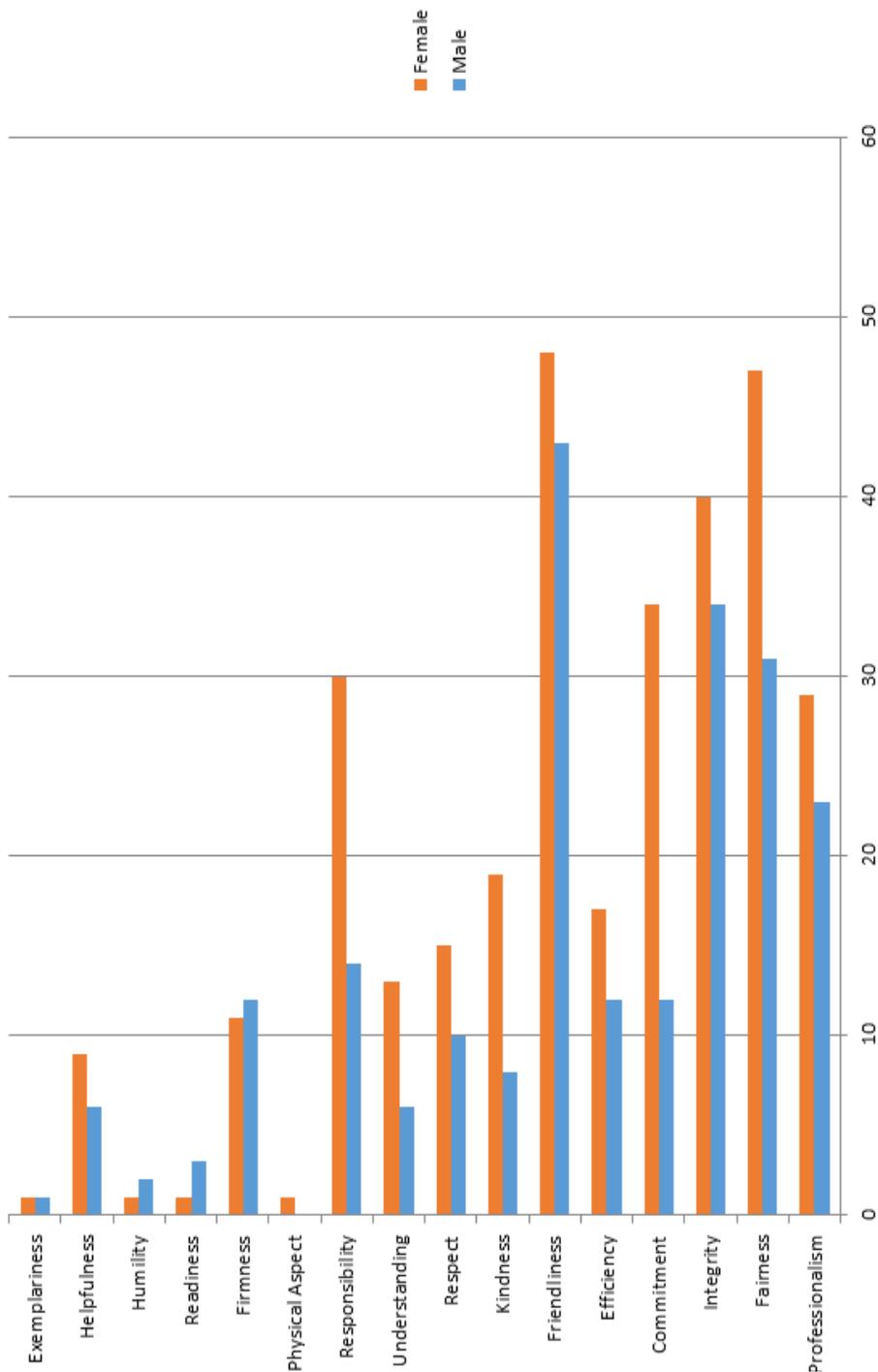


Fig.4 : Frequency of responses for expected demeanour by gender

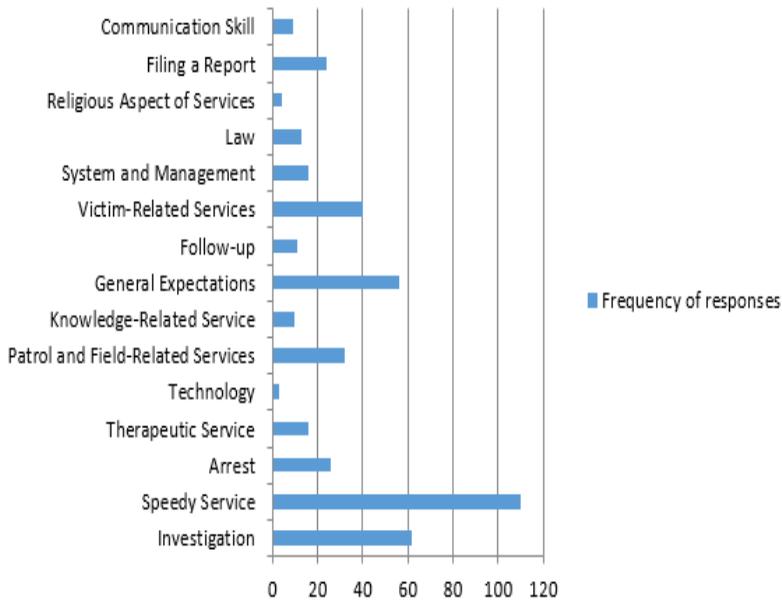


Fig. 5 : Frequency of responses for services that are expected to be delivered

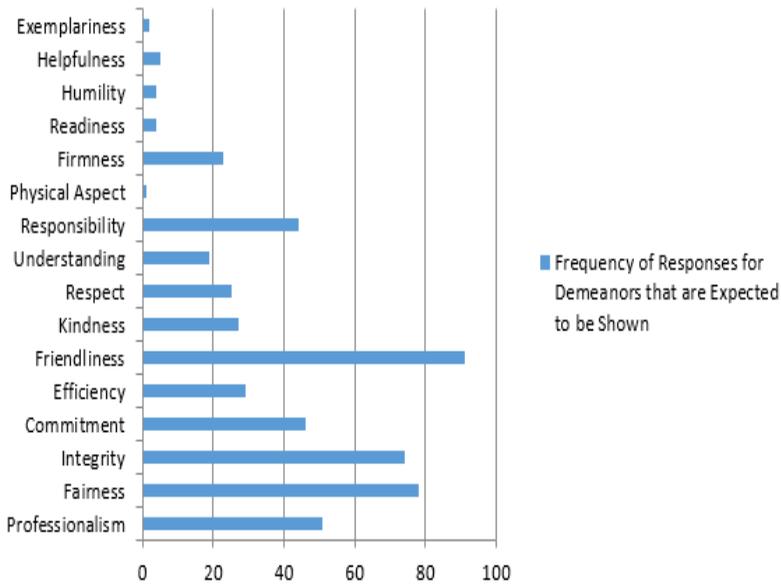


Fig.6 : Frequency of responses for demeanour that are expected to be shown

Although the responses were categorized, it was imperative to know the choices of words and terms that the respondents used to describe their expectations. The majority of these words were in the Malay language. However, this classification did not deal with accurate translation, but only synonyms. For the responses for services that were expected to be delivered, the responses were classified into 15 themes (for summary of the responses, refer to Chart 1):

1. Speedy services: All responses that belonged to this theme used either the words “fast” or “don’t delay”.
2. Investigation: All responses that belonged to this theme used the word “to investigate”.
3. Arrest: All responses that belonged to this theme used the word “to arrest” or “to make an arrest”.
4. Therapeutic services: The responses that belonged to this theme were:
 - i. To give counselling (5 responses)
 - ii. To calm down clients (4 responses)
 - iii. To give advice (3 responses)
 - iv. To be encouraging (2 responses)
 - v. To give moral support (1 response)
 - vi. To instil confidence (1 response)
5. Technology: The responses that belonged to this theme were:
 - i. To implement online reporting facility (2 responses)
 - ii. To implement special reporting facility for women and children (1 response)
6. Patrol and field-related services: The responses that belonged to this theme were:
 - i. To do regular patrol (21 responses)
 - ii. To go to the place of emergency upon making of report by client (11 responses)
7. Knowledge-related services: The responses that belonged to this theme were:
 - i. Fluency in English and/or Malay (4 responses)
 - ii. Knowledge in law (3 responses)
 - iii. Academically qualified (2 responses)
 - iv. Fluency in local dialects (1 response)
8. General expectations: All responses that belonged to this theme used either the word “to take action” or “to solve problem”.
9. Follow-up: All responses that belonged to this theme described that the police must follow up with the client either “to get new information” or to “inform the status of the case”.
10. Victim-related services: The responses that belonged to this theme were:
 - i. To help the victims find their stolen items (9 responses)
 - ii. Educating the victims/community on their rights, awareness etc. (7 responses)
 - iii. To give protection and security for the victims (7 responses)
 - iv. To help/assist the victims (7 responses)
 - v. Advocacy and justice (6 responses)

- vi. Referrals to other services such as those of a lawyer and insurance programme (3 responses)
- 11. System and management: The responses that belonged to this theme were:
 - i. Less bureaucracy (4 responses)
 - ii. Systematic management and procedures (4 procedures)
 - iii. Location of investigator should be systematic (2 responses)
 - iv. Improvement of services at the counter (2 response)
 - v. To not deny or refuse case and move it to another branch (1 response)
- 12. Law: The responses that belonged to this theme were:
 - i. To convict the offenders and to punish them (11 responses)
 - ii. To tighten laws (1 response)
 - iii. The court's role in listening to the victim (1 response)
- 13. Religious aspect of services including to also put non-Muslim officers at the service counter as there are non-Muslim victims (1 response); to be generally religious (one response); and to implement Islamic law (2 responses)
- 14. Filing a report; All responses that belonged to this theme used the words "to file a report" or "to take a report".
- 15. Communication skills. All responses that belonged to this theme emphasised on the listening skills of the police officers.

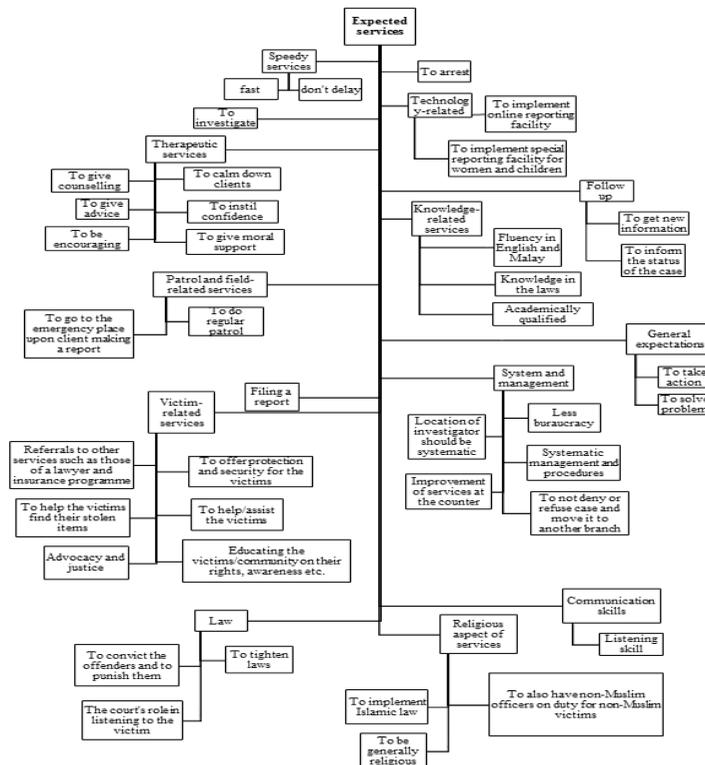


Chart 1: Breakdown of responses for expected services

Regarding the responses for demeanour that was expected to be shown by the personnel, 16 themes were identified (the summary is presented in Chart 2). The stated expectations were:

1. Professionalism: Other than the use of the general word “professional” (10 responses). Some responses that belonged to this theme were more specific:
 - i. To not be angry/provocative/aggressive (20 responses)
 - ii. To have patience (8 responses)
 - iii. To not make assumption (5 responses)
 - iv. To not burden the clients (2 responses)
 - v. To not belittle the clients (2 responses)
 - vi. To not take advantage on the clients (2 responses)
2. Fairness: All responses that belonged in this theme used either the word “to be fair” and “to not be biased”. One response specified it to “not be racist”.
3. Integrity: Other than the general word “to have integrity” (5 responses), other responses that were more specific that belonged to this theme were:
 - i. To be honest (25 responses)
 - ii. To not be involved in bribery (23 responses)
 - iii. To be sincere (18 responses)
 - iv. To be transparent (6 responses)
 - v. To not abuse power (4 responses)
 - vi. To be reliable (2 responses)
 - vii. To be ethical (1 response)
4. Commitment: Other than the word “committed” (5 responses), responses that belonged to this theme were:
 - i) Serious (20 responses)
 - ii) Hardworking (8 responses)
 - iii) Dedicated (7 responses)
 - iv) Disciplined (6 responses)
 - v) Punctuality (1 response)
5. Efficiency: Other than the word “efficiency” (24 responses), other responses included:
 - i) Proactivity (3 responses)
 - ii) Effectiveness (1 response)
 - iii) Productivity (1 response)
6. Friendliness: All responses used either the general word “friendly” or “to smile”.
7. Kindness: Other than the word “kind” (13 responses), responses that belonged to this theme were:
 - i) Tolerant (5 responses)
 - ii) Courteous (3 responses)
 - iii) Considerate (2 responses)
8. Respect: All responses used the word “to respect” or “to be respectful”.
9. Understanding: Other than the use of the word “understanding” (5 responses), the responses that belonged to this theme were:
 - i) Concern (14 responses)
 - ii) Acceptance (1 response)
10. Responsibility: All responses used the word “responsible”, except for 1 response that specified it as “not move the case to another branch” and “not easily close the case without resolving”.

- 11. Physical Aspect. Only 1 response stated that police officers needed to have a well-built physique.
- 12. Firmness: Twenty responses for this theme mentioned the word “firm”; one mentioned “strong”, and another, “strict”.
- 13. Readiness: Readiness was described as being ready to:
 - i) Help (2 responses)
 - ii) To do job (2 responses)
- iii) Sacrifice (1 response)
- iv) Face offenders (1 response)
- 14. Humility: All responses that belonged to this theme used either the word “humble” or “to not brag and show off”.
- 15. Helpfulness: All responses that belonged to this theme used the words “to help” or “to be cooperative”.
- 16. Exemplariness: All responses used the word “to be exemplary”.

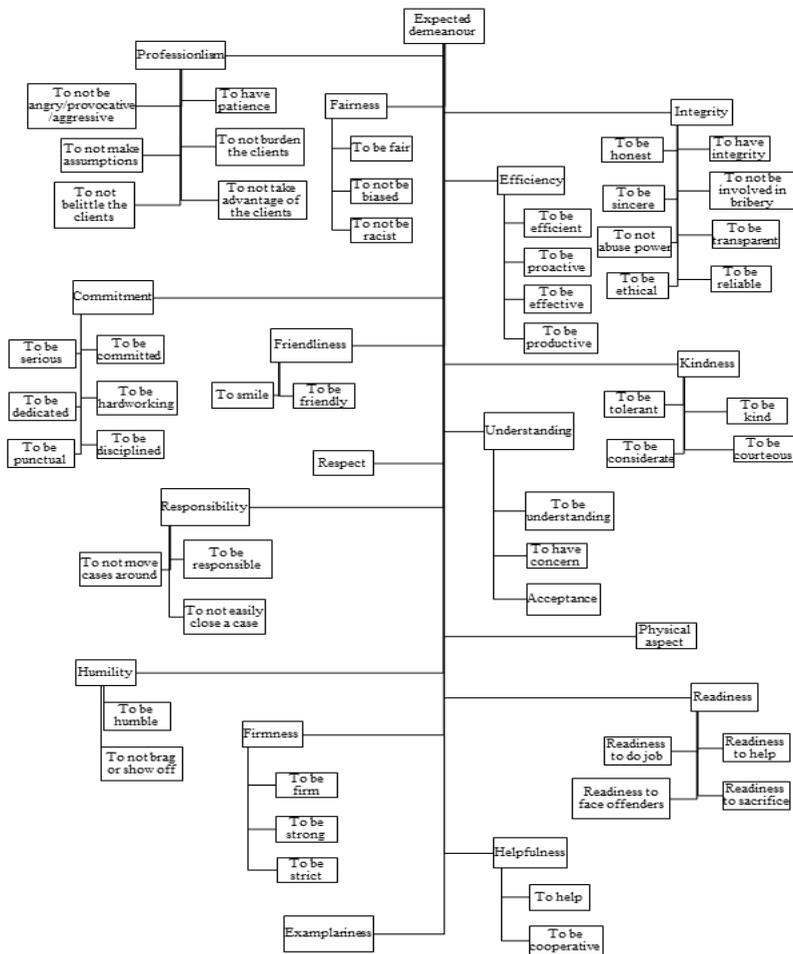


Chart 2: Breakdown of responses for expected demeanour

DISCUSSION AND RECOMMENDATION

The past literature (refer to Table 1) that studied public/victim satisfaction with the criminal justice system presented variables that determined what would make services by a criminal justice system satisfying for the respondents. In the current study, the demographic background and history of victimisation were presented to the respondents as fixed questions, added to having experienced dealing with the criminal justice system and their overall satisfaction with it.

For other variables of satisfaction with the services offered and demeanour shown by the personnel, the current study's findings were consistent with some of the variables compiled by past studies. It can be hypothesised that because these variables were also taken from other studies that were conducted in other countries, the consistency with which these variables were also mentioned by respondents in this study, there should be a degree of universality regarding the accuracy of these variables in predicting the effectiveness of the criminal justice system in different places that practise different cultures. This includes:

1. Seriousness (Myhill & Upson, 2007; Robinson & Stroshine, 2005),
2. Information-related services (Metropolitan Police Department of the District of Columbia, 2002; Myhill & Upson, 2007),
3. Response time/speedy services (Myhill & Upson, 2007; Robinson & Stroshine, 2005; Tewksbury & West, 2001),
4. Effects of criminal justice system contact (what the police and legal professionals do to help victims)/victim-centred assistance (Hotaling & Buzawa, 2003),
5. Courtesy (Robinson & Stroshine, 2005; Tewksbury & West, 2001),
6. Concern (Metropolitan Police Department of the District of Columbia, 2002; Robinson & Stroshine, 2005; Tewksbury & West, 2001),
7. Understanding (Robinson & Stroshine, 2005),
8. Listening carefully (Metropolitan Police Department of the District of Columbia, 2002; Robinson & Stroshine, 2005),
9. Helpfulness (Tewksbury & West, 2001),
10. Respect (Metropolitan Police Department of the District of Columbia, 2002),
11. Service provision in special knowledge and skills area such as making arrests (Metropolitan Police Department of the District of Columbia, 2002), and
12. Perception of safety (Metropolitan Police Department of the District of Columbia, 2002).

This study also compiled some variables that previous studies did not present. Most of these were in forms of services expected from the personnel. It should be noted that there was a variable of "what the police and legal professionals do to help victims" taken from the literature which may include "to investigate". However, "to investigate" is

a specific service provided, and, therefore, treated differently in this analysis. The variables included 1) to investigate, 2) to have therapeutic effect, 3) technology-related expectations, 4) field-related services such as making patrol, 5) knowledge-related expectations, 6) general expectations, 7) to make follow ups, 8) system-related expectations, 9) law-related expectations mostly from the court, 10) religion-related expectations, and 11) to make a report.

From the gap between the variables that are consistent with the past studies and the new variables shown by current studies, it can be seen there are patterns relating to this issue that are specific to the Malaysian context. First, the expectations that the personnel of the criminal justice system, specifically the police officers who filed the report, to have a therapeutic effect on the victims of crime shows that Malaysians would like the personnel to be more encouraging and assuring in the criminal justice process. This may be related to the high number of responses where the respondents expected the personnel to be friendlier and to smile more when communicating with the victims, besides having effective listening skills. The roles of police usually revolve around preserving the law, other than duties involving intelligence and response to national threats (Kun, 1996). Of all the roles defined, none involves their having to play the role of counsellor. However, this does not undermine the importance of counselling skills in this line of work. Hetherington (2001) emphasised that now, the role of the police had evolved

to resolving/mediating conflicts as well as negotiating with the public. This role requires police officers to be able to function in the role of and be proficient in the skills of a counsellor in their line of work particularly if the public are to cooperate with the preservation of the law.

Second, quite a high number of respondents stated that they expected police officers to “take action” and to “solve the problems” faced by the victims. General expectations provided a few hypotheses regarding the degree of knowledge that Malaysians possess regarding what the police or other personnel in the system could offer them. It can be hypothesised that to expect police officers to take action after the victim of crime makes a report shows that the victim does not have accurate knowledge about what the police should do for him or her. This is related to the importance of transparency between legal personnel and the public (Park & Blenkinsopp, 2011). By being transparent about what the system and the personnel can do for the public, including their roles and responsibilities, satisfaction can be increased because of the increased awareness.

Ambiguity about what the system can offer can also be related to a very small number of respondents whose responses belonged to the victim-related expectations such as assuring victims’ safety and providing external services such as insurance and a lawyer for the victim. Another hypothesis that can be gathered from this is general expectations could be related to the slow progress of movement of

victims' rights in this country where victims of crime virtually have nowhere to go after victimisation.

Third, Malaysian culture should also be considered and this could be seen from a few respondents whose responses belonged to the religion-related expectations. Malaysian culture can be said to revolve around religion. Malay culture, the main culture in Malaysia, is influenced by Islamic tradition. A few respondents mentioned that police officers needed to consider religious aspects of the services such as knowing Islamic laws while a non-Muslim respondent stated that there should be non-Muslim police officers in every station because not all victims of crime are Muslims.

This highlights an important point when it comes to the cultural aspects of the services provided by the criminal justice system as Malaysia is a multi-cultural country. The effectiveness of services provided might be dependent on how the services respond to the diversity of the clients. Cultural diversity awareness is consistently advocated as a factor to service effectiveness because of several reasons. First, cultural awareness is related to awareness of own judgments, feelings and thoughts that may cause prejudice and discrimination (Coderoni, 2002). Second, cultural awareness is especially necessary in modern societies as the world gradually moves towards pluralism (Shusta, Levine, Harris, Wong, & Olson, 2010). Third, in a more extreme case, diversity within the police force could mediate in violence towards members of the public of different ethnicities (Smith, 2003).

Also related to Malaysian culture is the fact of the existence of different races, which means that language is also an important aspect of the services. Some respondents pointed out that police officers needed to master both the Malay and English languages as some Malaysians might not speak Malay. Related to this, one respondent said that police officers also needed to master local dialects of different states in Malaysia as it could help in communication between the police officer and the client. The importance of language is reflected in a study by Skogan (2005) in which a cluster of data analysis found that if the client was of a speaker of a different language, satisfaction dropped. This study, coupled with the few responses from the current study showed that language might be a factor in satisfaction with services provided by the legal system.

Fourth, it is also important to acknowledge that although the questionnaire posed questions about the general personnel of the criminal justice system, the respondents always gave their answers according to their experiences with the police. Only a few respondents gave an insight into what the court, for example, could do for the public while none of the respondents said anything about the prison system, which is one of the components of the criminal justice system (May *et al.*, 2007). This further shows the limited knowledge of the respondents of the criminal justice system and services offered by the personnel in the system, including the police and the court. Although it is reasonable to assume that victims would rarely have to deal with the prison system,

they are still supposed to have an important position in the court and there are various ways the court can help the victims in the aftermath of a crime. The extent to which Malaysians know what to expect from the court as shown in this study implies that perhaps Malaysians are not aware of the role of the court and how it can benefit them. This should be further looked at in future research endeavours.

Providing services while also acknowledging the insights of the service beneficiaries would be wise in seeing if the services provided might be lacking in certain aspects that could determine their overall effectiveness. This current research aimed at identifying the overall satisfaction of Malaysians and their open-ended insights into what variables made good services provided by the criminal justice system. This included the police, the court and the correctional facilities. This current study suggests that more systematic studies might be conducted that employ close-ended methods once variables are identified. The findings can be the guiding keys to determining the effectiveness of a component of a criminal justice system.

CONCLUSION AND IMPLICATIONS OF THIS STUDY

One significant distinction of this study from other satisfaction studies was that the variables of factors of satisfaction were not predetermined. Rather, this study asked the respondents what made them feel satisfied towards the services given by the criminal justice system. It is recommended that

policy makers, practitioners, personnel of the system and researchers appreciate that satisfaction patterns can be unique to the locality of the people.

Although the sample of this study was only Malaysians, the study contributes to the literature by highlighting that satisfaction with the criminal justice system can be determined by both factors that are universal and specific to the local context. Universal factors such as speedy services, understanding and giving the clients the perception of safety exist in the literature and were also mentioned by the participants in this research. This, to a certain extent, showed that the factors could be the values that are shared across cultures and boundaries.

While the more locally specific factors of expectations in this study focused on the context of Malaysia, this study also highlighted that researchers who envision to understand what makes citizens feel satisfied towards the services of the criminal justice system should acknowledge the fact that there would be some factors that do not seem to be important in other cultures and countries. However, these factors nonetheless are still deemed as being important by the clients of the particular culture. Therefore, future research, policies and programmes involving the criminal justice system should be more comprehensive i.e. universally and locally relevant in their design and implementation.

This study would also like to reaffirm the objective shared with the literature that understanding what makes citizens

feel satisfied towards the services offered by the criminal justice system leads to the system being more responsive towards the needs of the clients. It is recommended that the government of every country consider conducting a nation-wide satisfaction study in order to understand the criminal justice system from the lens of the people, and not just of the government. This is especially important because the people are one of the main stakeholders and the key role players in the system, and to ignore their perspectives would be to take a step backwards.

To begin acknowledging the voices of the people or the clients of the criminal justice system is to answer the call by academics around the world that the criminal justice system should start becoming more victim-orientated. Victims should be treated as one of the key actors rather than the tools for evidence. The governments should consider the victims' perception towards the system as a determining factor of its effectiveness. This is not to say that the offenders or even the government should be put aside, but victims should be brought to the forefront as they are equally important as the former two stakeholders. This is why citizen satisfaction studies are important studies: the government can utilise the empirical findings to investigate the effectiveness of the system in addressing the needs of the people.

By understanding that satisfaction is not one-dimensional, but that there are patterns of satisfaction with the system that need to be understood and explored, researchers and practitioners of various fields, particularly of

social sciences, are able to devise a measure to ensure that services offered by the system are comprehensive and considerate towards the needs of the victims as one of the key actors. In addition, this will allow advocacy work done by social workers and other professions who advocate for the welfare of the victims, especially after undergoing an unfortunate event of victimisation, to be meaningful.

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Interpersonal-driven Features in Research Article Abstracts: Cross-disciplinary Metadiscourse Perspective

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ABSTRACT

Being a specific communicative genre of disseminating knowledge in today's academic arena, the research article abstract has its own specific conventional structure. Through such a seminal genre, research article writers are able to ratify and contribute their own new findings to the research community they belong to. Taking a cross-disciplinary quantitative approach, this study explores the status of interactional metadiscourse markers as prevalent interpersonal-driven features in research article abstracts. The central objective is to investigate how research article writers in particular discipline tackle and deploy interactional metadiscourse markers in the abstract section of their papers in the effort to propagate their ideas. Hyland's (2005) taxonomy of metadiscourse was adopted to analyse sixty research article abstracts written in two disciplines (Applied Linguistics and Economics) sourced from discipline-specific journals. As found, variations across the two fields of knowledge studied were enormously marked. Results of the present research may be of help for research article writers, particularly novice writers, to learn more about the socio-rhetorical conventions and prevalent discursive strategies established in their own specific disciplinary community.

Keywords: Interactional metadiscourse markers, research article abstracts, disciplinary community, genre.

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INTRODUCTION

As a genre in academic context, the research article (hereafter RA) abstract has lately provoked great motivation in research because of its major role in academic community. It acts as a “time-saving device” which lets readers know the precise content of the article. That is, through reading the RA abstract, readers can evaluate whether the article deserves to be given more attention or not (Martin-Martin, 2003). In the same line of argument, Hyland (2000, pp. 64-65) describes that due to the competitive character of the research community, RA abstracts serve as an “advertising means” to call readers’ attention towards the whole research paper.

Many scholars have worked on the abstract section of RA (Chan & Ebrahimi, 2012; Ghadessy, 1999; Hu & Cao, 2011; Hyland & Tse, 2005; Khedri *et al.*, 2013; Lores, 2004; Martin-Martin, 2003, Pho, 2008). As found by some researchers (Dahl, 2004; Hyland, 2000; Lores, 2004, Samraj, 2005), abstracts appear to be a separate genre, not solely the replication of RA. Lores (2004) mentions that these two genres of communication in the academic setting differ from each other regarding their function, rhetorical structure, and linguistic realisation. It is well-known that in written academic genres, namely RA, textual elements are realised through various linguistic resources, and among them, metadiscourse markers. They help writers to make judgment about what they write and to convince audiences about the significance of the position supposed in

the abstract and the whole study (Crismore *et al.*, 1993). In this sense, Garcia-Calvo (2002) adds that looking at metadiscourse in abstract would let us grasp the application of metadiscoursal features as a persuasive tool in order to create tighter and more influential abstracts.

By definition, metadiscourse refers to “self-reflective linguistic expressions referring to the evolving text, to the writer, and to the imagined readers of that text” (Hyland, 2004, p. 133). Metadiscourse markers are facilitating tools in social communications which contribute to producing knowledge within the discipline and owing to the divergent nature of disciplines, metadiscourse usage is various between disciplines (Hyland, 2005, p. 143). Therefore, it would be advantageous to work on abstracts from the metadiscursive perspective and see how abstract writers from different disciplines shape their knowledge claims by the use of metadiscoursal features.

Rejecting the Hallidayan (1973) duality of textual and interpersonal macro-functions of language and adopting Thompson’s (2001) key terms, “interactive” and “interactional” resources as two inter-related features of interaction, Hyland (2005) contributed his novel pragmatically developed model which considers all metadiscourse as interpersonal. To him, this model “takes account of the reader’s knowledge, textual experiences and processing needs and that it provides writers with an armoury of rhetorical appeals to achieve this” (Hyland, 2005, p. 41). He categorised metadiscourse into two broad resources: interactive and interactional.

The former, concerns with organising the discourse and indicates the extent to which the text is constructed based on the readers' demands in mind. Interactive features are of five types: transitions markers, frame markers, endophoric markers, evidentials and code glosses. On the other hand, interactional domain of metadiscourse deals with the approaches writers interact with audience commenting on argumentation, intruding their feelings, attitudes and commitment into the text. Through these markers, writers are able to share their ideas in a clearer way and also to bring readers into the discourse by allowing them to give feedback about the information given. Hedges, boosters, attitude markers, engagement markers and self-mentions compose the subcategories of interactional metadiscourse markers (Hyland, 2005, pp. 46-53).

In Hyland's (2005, p. 44) words, interactive markers "primarily involve the management of information flow", whereas interactional metadiscourse is "more personal" and involves the reader more overtly in the text by commenting on and evaluating the text material. As such, since interactional metadiscourse are more directly and manifestly dealt with interpersonality, we have confined our study to this domain.

In literature, numerous studies have been devoted to the notion of metadiscourse through different genres and from different perspectives (Abdollahzadeh, 2011; Crismore *et al.*, 1993; Dafouz-Milne, 2008; Gillaerts & Van de Velde, 2010; Hu & Cao, 2011; Hyland, 1998, 2005; Hyland

& Tse, 2004; Khedri *et al.*, 2013; Lindeberg, 2004; Mur-Duenas, 2011; Vande Kopple, 1985) Among them, Lindeberg (2004), Gillaerts and Van de Velde (2010) and Khedri *et al.* (2013) have incorporated the essence of metadiscourse in RA abstracts. As evidence, Khedri *et al.* (2013) set out a work on exploring interactive metadiscourse markers in academic RA abstracts in the two disciplines of Applied Linguistics and Economics. They found pronounced socio-rhetorical variations in the ways applied linguists and economists construct their argumentations through interactive metadiscourse features. Gillaerts and Van de Velde (2010) also worked on the status of hedging and boosting devices in the abstract section of RAs, but in a historical sense. Lindeberg (2004) investigated two interactional metadiscourse resources, hedges and boosters, as promotional and mitigated strategies not only in RA abstracts but also other rhetorical sections of article in three business fields. Considering the existing literature, to the best of the authors' knowledge, the inquiry area of metadiscourse, especially interactional markers in the well-established distinct genre of RA abstracts, remains unclear and needs further works. Briefly speaking, to bridge the gap, the present study attempts to shed more light on the matter of interpersonality in RA abstracts through interactional metadiscourse markers by focusing on the possible similarities and variations across two different disciplines. To this end, this study seeks to answer the following questions:

1. What are the types of interactional metadiscourse markers used in RA abstracts in Applied Linguistics (AL) and Economics (Eco)?
 2. Is there a significant difference between the two disciplines in focus in regards to the manifestation of interactional metadiscourse markers?
- **Number of RA abstracts:** Sixty RA abstracts were picked up (thirty from each discipline).
 - **Year of publication:** All articles from which the abstracts were taken have been published between 2000 and 2011.
 - **Journal:** Informants knowledgeable in each discipline were consulted and asked to nominate and rank highly prestigious leading journals. After which, RA abstracts in AL were sourced from Journal of Pragmatics and English for Specific Purposes and all RA abstracts in Eco were taken from Oxford Economic Papers.

METHOD

Corpus compilation

The corpus of this comparative and contrastive research comprises sixty RA abstracts. Details of the corpus are as follows:

- **Discipline:** AL and Eco. Within the scope of the current research, two disciplines were selected without rhyme or reason. Following Becher's (1989) taxonomy of disciplines, both grouped under the category of soft sciences. AL was chosen mainly due to the fact that the researchers are ESL teachers who teach writing, which includes technical writing of this nature and, likewise AL, Eco symbolizes an area which belonged to the same sciences, soft. To add on, fairly few works have been conducted across soft sciences disciplines, for instance, Eco with AL (Hyland, 1998, 2001; Khedri *et al.*, 2013). Thus, the present comparison projected into another dimension of surveying cross-disciplinary genre features within a specific field of knowledge (soft sciences) as argued.

Following Grabe (1987) and Paltridge (1996), the corpus selection was based on three requirements: genre, ESP, and text type. As mentioned earlier (see Introduction), RA abstracts act as a separate communicative genre in academic arena, so they were selected to meet the first requirement. To meet the second, RA abstracts were solely extracted from two different disciplines. Last, to fulfil the third requirement, this study was narrowed down and focused on abstract section of RAs since its persuasive nature seemed suitable for the identification of metadiscourse elements which carry the interpersonal meanings.

The analytical categories

Based on the taxonomy of metadiscourse provided by Hyland (2005), four kinds of interactional metadiscourse markers including *hedges*, *boosters*, *attitude markers*,

TABLE 1
Details of the corpus

	AL	Eco
No. of RA abstracts	30	30
No. of journals from which the abstracts were taken	2	1
No. of RA abstracts taken from each journal	15	15
Length of RA abstracts (range)	98-270	78-150
Total number of words of RA abstracts	5372	3643
Total number of tokens	222	205

and *self-mentions* built the categories for analysis. The choice of interactional metadiscourse can be justified by the assertion of Williams (1981) and Crismore and Farnsworth (1989). In their studies, they found that scientific text authors who wanted to arouse their readers use logical, ethical, and emotional assertions. They showed more affinity with the audience by applying a bigger amount of interactional metadiscourse than interactive metadiscourse.

As defined by Hyland (2005, pp. 52-53), hedges reveal the writer's decision to realize the other voices and points of view. Hedges mark a writer's unwillingness to present propositional information categorically, such as: *perhaps, about, possible, might*. Boosters allow writers to close down alternatives and express certainty in what they say, such as: *it is clear that, definitely, obviously*. Attitude markers indicate writer's influential, not epistemic, viewpoint and attitude towards propositional content. Through attitude markers a writer conveys his/her personal feelings such as surprise, agreement, importance, obligation, frustration, and so on. Attitude is mainly expressed metadiscoursally by means of

attitude verbs (*agree, prefer*), sentence adverbs (*unfortunately, hopefully*), and adjectives (*appropriate, remarkable*). And, self-mentions refer to the extent of author presence in terms of first person pronouns and possessives like: *I, we, our, my, etc.*

The analytical procedure

This study was qualitative in nature and the analysis was based on a comparison and contrast. The corpus was analysed through the following steps. Firstly, all RA abstracts were traversed in electronic search using MonoConc Pro (MP) 2.2, a text analysis and concordance programme, to identify elements which functioned as interactional metadiscourse markers in concern. Secondly, all the elements found were cautiously analysed individually and manually according to the context in which they occur. The main aim of this step was to be certain about their functions as metadiscourse. Finally, the frequency of the different categories of interactional metadiscourse markers in each discipline was calculated per 1000 words due to the fact that the size of both corpora is not the same. In the present research, as the threat

of unreliability and misinterpretation in text analysis has always been a concern, a small subset of the corpus (three RA abstracts from each discipline) were respectively double-checked by two experienced researchers in the field of Applied Linguistics.

RESULTS AND DISCUSSION

By applying interpersonal-driven elements, i.e. metadiscourse, writers try to interact with readers, secure acceptance from audiences and signal their own truth-value opinions and voices about information given. As Abdi (2002) remarks, the more interpersonal the nature of the metadiscourse markers mapped in a piece of text, the more the author meant to get these aims fulfilled. Table 2 reports the raw number of occurrences of analytical categories and their frequency per 1000 words in each field of knowledge.

With reference to the results pictured in Table 2, all analytical categories were applied by both AL and Eco authors in their RA abstracts. As the figures show, the overall use of interactional metadiscourse markers in the two major disciplines turned out to be markedly variant (41.32 versus 56.27 tokens per 1000 words in AL and Eco, respectively). Such a situation proposes that Eco writers attempted to build up a close relationship between themselves, text and readers. They appealed to interactional metadiscourse markers that would likely collaborate in creating suitable interactional influences. This tendency among economists may also indicate their consciousness of the required processes of text production and the generic and disciplinary needs established

by experts in the discourse community as well. The status of each category across both disciplines is described below and some examples extracted from the corpus are provided as well.

As shown, hedges played as the foremost analytical category in both corpora, though more frequently in Eco. They constituted 16.20 items and 13.77 items per 1000 words in Eco and AL in that order. From this finding, it follows that dissemination of new information tentatively is of significance in academic writing, at the most least in the soft sciences RA abstracts under investigation. Specifically, in soft sciences disciplines like AL and Eco, variables are continual and outcomes are somewhat provisional because they might be reliant on the data and/or measures employed. Consequently, authors do need to downplay their comments and make them tentatively so that addresses which may be keen on the implications of the work are convinced. The approval or refusal of knowledge claims is essentially based on the readers' judgment of the authority and trustworthiness of the research reported by writers. It is worthy to mention that hedges serve a crucial function in inducing readers of that authority and credibility. This is due to the fact that hedging devices contribute to alleviating the level of certainty attached to the propositional content. It could be pointed out that the most highly use of hedges by RA writers in the two corpora signals two more points: firstly, the awareness of both groups of authors of the essential significance of making distinction between fact and opinion in academic

writing; and secondly, the requirement for writers to commit to proposition in ways that their assertions may look sound and persuasive to readers. This result corroborates with Hyland's (2004, 2005) and Abdollahzadeh's (2011). Comparing with other categories of metadiscourse under his study, Abdollahzadeh (2011) found more hedges in the whole data. Hyland (2005) also recognised that the presence of hedging devices is more usual in the humanities and social sciences papers and this could be due to the more interpretive and less abstract nature of soft sciences disciplines. He adds that in soft fields, writers shape their arguments based on interacting with readers and creating a dialogue so as to allow them to share their own alternative voices. The followings are examples of actual use extracted from the corpus.

E.g. 1: This variation *seems* to be due to the adoption of differing interpersonal strategies... [AL]

E.g. 2: ...because their actual pollution levels *are likely* to be lower than in nations with less effective regulation. [Eco]

Interestingly, apart from hedges, self-mentioning devices realised in the sub-corpus of Eco also constitute the most highly prevalent interactional features with an exactly similar frequency rate to that of hedges, 16.20 instances per 1000 words. Quite the reverse, these interactional resources were found as the least frequent interpersonal-driven elements employed by applied linguists accounting for only

2.79 instances per 1000 words. This finding reveals that applied linguists disposed much less towards signalling their authorial persona, establishing their credentials and showing themselves as original contributors and conductor of research, which all are functions served by self-mentioning devices such as I, we, the researcher, the author, etc. As a matter of fact, authors' decisions depend on their own disciplinary nature and its social and epistemological practices and signal an essential means of displaying membership. So, the possible justification for such a variation may refer to the nature of Eco. Eco appears in some way more competitive in essence as scholars in this field are seeking more to find a space in the international sphere through publication. To this end, self-mentions may be of use to help them to project themselves into the text explicitly, to express their authorial persona and authority and to make their work outstanding. In this regard, Kuo (1999) asserts that in research writing, the use of self-mentions strategically assists authors to maintain such authority by stating their convictions, accentuating their involvement to the field, and seeking credit for their contribution. In Hyland's (2001) words, self-mentions are crucial and serve significant functions in intervening the interaction between authors' statements and the discourse community they belong to. These metadiscoursal elements let authors shape an identity as both disciplinary servant and persuasive originator. By and large, despite the underuse of self-mentions by RA writers in AL, it can be claimed that

self-mentions are generally established in soft sciences fields including Eco and AL. Evidentially, in his study on textual elements which carry the meaning and function of self-mention in a corpus of 240 RAs written in eight disciplines from soft and hard sciences, Hyland (2001) found that RA writers in soft fields deployed these elements by far compared to their counterparts in hard fields. Text examples are:

E.g. 3: In this paper *I* argue that a particular type of Anglo-American legal discourse treats spoken language as a text artifact. [AL]

E.g. 4: *Our* results suggest that the euro has reduced the threshold size in order to export to Euro zone countries. [Eco]

As for the next interactional metadiscourse marker, boosters acted as the second most common features in the two major fields totalling 14.27 times in Eco and 13.03 times per 1000 in AL. Though it was commented earlier that RA writers in Eco tended more to mitigate their argumentations by the use of hedges in comparison to their counterparts in AL, results revealed that economists preferred to emphasise more on the ongoing propositions than applied linguists. It seems such a tendency of Eco writers may refer to the disciplinary nature of doing research and RA writing in their field as they signal their certainty and conviction more while contributing their own new findings to the research community. In doing so, they

suppress and fend off readers' alternative perspectives more than AL writers. As put forward by Hyland (2005), "by closing down possible alternatives, boosters emphasize certainty and construct rapport by marking involvement with the topic and solidarity with an audience, taking a joint position against their voices" (p. 53). Here are the examples taken from the corpus.

E.g.5: The approach taken in this study *shows* potential for further research and pedagogic applications. [AL]

E.g. 6: Lagged productivity is *strongly* associated with exporting...[Eco]

Concerning hedges and boosters, as found, both were highly used in the two corpora though hedges were realised more common. In this line of argument, Hyland (2005) reached the same result in his study. He found that both hedges and boosters appeared to be more frequent in the humanities and social sciences papers, with about 2.5 times as many devices overall and hedges specially robustly recognised. This is fundamental because soft disciplines are characteristically more argumentative and less abstract and their forms of argument are dependent more on a dialogic engagement and more explicit acknowledgment of different voices. It is true that any research endeavour is affected far more by contextual features and there is less control of variables, more variety of research findings, and commonly fewer plain bases for admitting new knowledge. Hence, RA writers in soft-knowledge disciplines

cannot comment on their discourses with the same assurance of joint assumptions. As put forwarded by Hyland (2005), they need to appeal much more to paying readers' attention on the claim-making dialogues of the discourse community, the claims themselves, rather than fairly unmediated real-world phenomena.

On the other hand, the fact that methodologies and outcomes are not close to further inquiry implies that soft disciplines' writers must work harder to establish the worth and implications of their study against possibly alternative explanations. This suggests that they are required to confine, or close down, potential alternative interpretations, fending them off by employing boosters to lay emphasis on the force of the writer's pledge, and thereby induce the readers by the use of the strength of the claim.

As for another interpersonal-driven feature, attitudinal linguistic features designate the writer's affective, rather than epistemic, attitudes, encoding an explicit positive or negative value (e.g., *agree*, *prefer*, *fortunately*, *importantly*, *logical*, *significant*) to information presented. In this vein, Hood (2004) points out that in academic writing, writers frequently present their stance and attitude whereby the grading of propositional information, specifically the strength by which writers get across their judgements and feelings towards findings, entities or behaviours. Once again, these kind of explicit judgements foreground authors and so were found more frequently in soft-sciences papers in both corpora where they contribute to a writer's persona, create a

research space and bring into being a linkage with the disciplinary community. With reference to the figures depicted in Table 2, the total distribution of attitude markers that characterised in the whole corpus was 98 cases. Of this number, 63 cases which accounted 11.73 hits per 1000 words were found in AL article abstracts and the other 35 cases equaling 9.60 hits per 1000 words were featured in those of Eco. This higher employment of attitudinal languages by applied linguists could reflect that they feel more at ease to express their subjectivity and feelings towards the proposition given. In other side, economists somewhat express their attitudes cautiously so as to keep the academic essence of their argumentations by sidestepping emotions. Although there is a discrepancy between the two disciplines, overall, both belong to soft sciences. Due to the inability of authors in drawing strongly on empirical demonstration or proven quantitative methods, they need to interact with readers more with the aim of involving and persuading them to turn from alternative interpretations (Hyland, 2004). The following examples manifest the real use of attitude markers in texts emerged from the corpus analysed.

E.g. 7: Metadiscourse plays a *vital* role both in organizing the discourse and in engaging the audience. [AL]

E.g. 8: Formal commercial collaborations can be *important* in overcoming the (information) sunk costs of entering export markets. [Eco]

TABLE 2
Frequency analysis of interactional metadiscourse in each discipline per 1000 words

	AL		Eco	
	Raw no.	Freq (er 1000 words)	Raw no.	Freq (per 1000 words)
Hedges	74	13.77	59	16.20
Boosters	70	13.03	52	14.27
Attitude markers	63	11.73	35	9.60
Self-mentions	15	2.79	59	16.20
Total	222	41.32	205	56.27

Note: *No=Number; Freq=Frequency*

CONCLUDING REMARKS

In academic writing, interactional metadiscourse markers serve an important function in producing a more cohesive and reader-friendly text assisting authors to interact with audiences and signal their truth-value towards propositional content. In the current research, interactional metadiscourse markers were found to manifest quite differently across the two disciplines in focus. In both fields, RA abstract writers were influenced by socio-rhetorically disciplinary norms and conventions while contributing their own new findings to their particular community. For instance, in the case of self-mentions, it was shown that Eco and AL article abstract writers showed a different affinity towards mapping these interpersonal-driven features as they acted as the leading category in Eco but the infrequently used features in AL.

However, there are some limitations in the present study. Here, we took a comparative approach and explored RA abstracts in the fields of AL and Eco with the aim of teasing apart disciplinary variations and similarities metadiscursively. To achieve

a more comprehensive knowledge about the effect of disciplinary conventions and norms on metadiscourse usage, it needs to enlarge the corpus, and compare and contrast various fields of knowledge other than those put under investigation in this study regarding both interactive and interactional domains of metadiscourse. In addition, it is recommended that metadiscoursal features used in other academic genres should be explored, such as RA and its constituent rhetorical sections, Introduction, Method, Result and Discussion (IMRD, proposed by Swales, 1990). Scholars believe that research can clarify the communicative purpose of the various rhetorical sections of RA in influencing the degree of uncertainty, flexibility, writers' involvement, authorial persona, and attitudinal language through different linguistic expressions (Abdollahzadeh, 2001; Hopkins & Dudley-Evans, 1988; Salager-Meyer, 1994).

As implication, the results of this study can be of value to academics in fields of Eco and AL, and others who are interested in getting recognition from their community members through RA writing, and finally

publication in internationally leading journals. Research enables interested parties to become more familiar with public goals, norms and socio-rhetorical conventions conditioned by the practices of specific disciplinary communities.

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Musculoskeletal Pain Among Migrant Workers in the Malaysian Manufacturing Industry: The Impact of the Physical Environment, Workload and Work Patterns

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ABSTRACT

Although migrant workers represent a substantial proportion of Malaysia's workforce and are acknowledged as a major contributor to Malaysia's rapid economic growth strategy, the risk of increasing musculoskeletal disorders among migrant workers in Malaysia has been largely ignored. The present study reports findings from a study of 317 migrant workers from the manufacturing industry. The aims of the study were to: a) assess overall levels of musculoskeletal pain, b) examine whether physical environment conditions were associated with musculoskeletal pain, and c) identify whether workload and particular work patterns were associated with the reporting of musculoskeletal pain. Data were obtained through self-report questionnaires administered by means of a series of structured interviews and analysed using logistic regression and odds ratios. Results suggest that the overall levels of musculoskeletal pain were high, with over two thirds of the respondents reporting symptoms of musculoskeletal pain. In terms of physical environment conditions, the lack of reliability of machinery/equipment and exposure to dust posed an increased risk for musculoskeletal pain. Workload and various work patterns such as working long hours, night shift working and pressure to meet quotas all contributed to an increased risk of musculoskeletal pain. Prevention efforts should include a transition to more healthful and reasonable working hours, scheduling practices as well as general improvement in the physical environment of factory premises.

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INTRODUCTION

Migrant workers represent a substantial proportion of Malaysia's workforce. Reports suggest that out of a labour force of approximately 12 million, the number of legal migrant workers in Malaysia was about 2 million as of 2007 (Department of Immigration, 2009). This represents a 9.4% increase in the number of migrant workers compared to 2006, when they numbered only about 1.87 million (Department of Immigration, 2009). The majority of migrants are low-to-medium skilled workers and have been used to fuel the country's rapid economic growth strategy. Although the Malaysian government has relied on migrant workers since the 1980s, there is no comprehensive policy regarding the recruitment and placement of such workers. Migrant workers are typically employed in one of five approved sectors by the government, namely the plantation, agriculture, construction, manufacturing and service sectors (News Straits Times, Apr 2012). The present study focuses specifically on migrant workers in the manufacturing sector due to the large proportion of workers in that sector. It is estimated that approximately 700,000 migrant workers are employed in manufacturing, accounting for the largest sector of employment for migrant workers (38.2%), followed by construction (16.0%), plantation (14.2%) and domestic services (12.5%) (The Star online, May 2012). In Malaysia, the majority of migrant workers are paid low wages, raising questions on the knock-on effects on overall levels of productivity and

quality of skill of the labour force in the long term (Malaysian Insider, May 2012). Heavy reliance on low-skilled foreign labour is thought to trap the economy in a low-wage, low-skill equilibrium, slowing down the country's transformation into a highly-skilled economy. Nevertheless, foreign labour remains in great demand as many companies face difficulties in attracting local workers to take on low-wage jobs.

Migrant workers involved in construction, mining, agricultural work and heavy manufacturing often take on jobs with poor environmental safety measures often rejected by local workers. They are often exposed to a range of occupational hazards including exposure to toxic agents and lack protective clothing or other faulty equipment (Abdul-Aziz, 2001, Braunschweig & Carballo, 2001 in Joshi, 2011), and thus are more likely to suffer from occupational injuries and disability than local workers (Al-Arrayed & Hamza, 1995; & Mou *et al.*, 2009 in Joshi, 2011). They are also forced to work extremely long hours, often comprising 12-hour shifts, six days a week.

In the manufacturing industry, musculoskeletal disorders (MSDs) are a common phenomenon. MSDs affect the muscles, joints, tendons or spinal discs and are primarily caused by the nature of work performed and occupational injuries and accidents. Injuries are most likely to affect the back, shoulders, neck and legs. Data on occupational diseases reported by non-governmental employees to the national worker's social security organisation in Malaysia from 2002-2006, suggest that

the overall incidence rate for occupational diseases was 2.8 per 100,000 workers, with musculoskeletal disorders (28%) being one of the most frequently reported conditions. Workers in the non-metallic manufacturing industry have the highest average incidence rate of musculoskeletal disorders (3.5 per 100,000 workers) compared to all other industries (Abas *et al.*, 2008). Migrant workers often end up experiencing pain, numbness, tingling and swelling in their bodies, reducing their ability to perform tasks, or even permanent disability if care and treatment are not sought. Often the biggest cause of injury comes from manual handling of heavy objects that includes lifting, lowering, pushing, pulling and carrying. Repetitive tasks in manufacturing work, even if the load is relatively light can also cause harm to the workers especially when performed in a less-than-ideal body position. Safety education, engineering control, workplace ergonomics and enforcement of workplace standards and incorporation of on-going surveillance system are important measures to facilitate the control and reduction of musculoskeletal diseases.

It is generally believed that MSDs are caused by multiple risk factors which have been generally categorised into physical (often biomechanical) and psychosocial risk factors. The biomechanical model suggests that there is an intimate association between some characteristics of work and mechanical load which give rise to MSDs. The psychosocial model, however, suggests that MSDs may be dependent upon the

psychophysiological effects of work stress. The evidence for the latter has consistently shown that worker evaluations of work design and management (psychosocial factors) are associated with the report of such pain (Smith & Carayon 1996; Buckle & Devereux, 2000). While the biomechanical mechanism has been extensively researched (Buckle, 1997), the stress-related mechanism has received much less attention (Bongers *et al.*, 1993). The present study seeks to identify the risk posed by specific physical environments and psychosocial factors on the reporting of musculoskeletal pain and discomfort caused or exacerbated by these hazards. Various mechanical factors such as heavy physical work, heavy or frequent manual operations, repeated rotation of the trunk, whole body vibration and prolonged sitting have traditionally been associated with low back pain, while work with hands at or above shoulder level, flexion of the neck, static contractions, monotonous or repetitive work, increased work pace and unsuitable work stations, have been associated with neck and shoulder pain (Hoogendoorn, *et al.*, 1999; Ferguson & Maras, 1997; Ariens *et al.*, 2000; Jensen & Eenberg, 1996). Relatively few studies, however, have examined the role of physical environment conditions in relation to MSDs.

The aims of the present study were threefold. First, it sought to assess incidence levels of musculoskeletal pain experienced by migrant workers in the manufacturing industry. Second, it sought to examine whether specific physical environment conditions such as exposure

to unpleasant smells, noise, dust and toxic substances and the lack of reliability of machinery/equipment and access to personal protective equipment in the factory premises were associated with the reporting of musculoskeletal pain. Lastly, it sought to identify whether particular work patterns such as working hours, unsociable hours, heavy workload and pressure to meet targets were associated with the reporting of musculoskeletal pain.

Evidence from the literature on psychosocial factors and musculoskeletal pain shows that nurses working in excess of 35 hours per week exhibited an increased risk of back injury (Engkvist *et al.*, 2000). Lipscomb *et al.* (2002) found that MSD was related to extended work hours, especially off-shift and weekend hours. Because extended work schedules increase overall levels of workload while limiting rest and recovery time, such extended hours may result in increased musculoskeletal disorders (Spurgeon *et al.*, 1997; Jansen *et al.*, 2003).

METHODS

Study participants were administered a questionnaire in the form of a structured interview by a research assistant employed on the project. Questionnaires were verbally administered on site in order to overcome literacy issues. Convenience sampling was employed and migrant workers were recruited from areas near manufacturing industries in Kuala Lumpur and Selangor. Four companies involved in manufacturing plastics (toys) and electronics were invited to participate in the study. Approximately 300 participants were initially targeted for

the study. A total of 320 questionnaires were administered, however, only 317 were completed in full, resulting in a response rate of 99%. The questionnaire was distributed during the period from March to April 2013 and included the following sections

Demographic Information

Information on nationality, age, sex, position, years working experience, years working in Malaysia, daily hours of work, benefits and product type manufactured.

Physical hazards and work patterns were measured using selected items of a questionnaire entitled 'Work Environment Survey' by the Centre for Organisational Health and Development of the United Kingdom for use in a study on stress conducted in Her Majesty's Prisons, according to the risk assessment-risk management methodology developed by Cox *et al.* (2000). The model underpinning risk assessment and management was a relatively simple one. Before a problem can be addressed, it must be analysed and understood, and an assessment made of the risk that it presents. The risk assessment provides information on the nature of the problem, the stress-related hazards and the way they might affect the health of those exposed to them. The latter enables key features of the problem, known as likely risk factors, to be identified and some priority is given to them in terms of the nature and size of their possible effects or the number of people exposed to them. These data can then be used to inform the development of an action plan to address such problems. The details of the methodology, and the

questions that arise about its reliability and validity, were addressed in a major report to the UK Health and Safety Executive, also in 2000 (Cox, Griffiths, Barlow *et al.*, 2000) that included six illustrative case studies. Needless to say, the methodology has been established as a valid and robust means of assessing physical and psychosocial work hazards in organisational settings, and has been heralded as 'best practice' in terms of assessing and managing risk by the UK Health and Safety Executive.

Physical Environment Hazards

Participants were asked to assess whether various physical hazards (smell, noise level, reliability of machinery/equipment, exposure to dust, exposure to toxic substances and access to personal and protective equipment were deemed a problem in their current work setting. Responses ranged from 1(not a problem) to 4 (always a problem).

Work Patterns

Participants were asked to assess whether the following work patterns were deemed a problem in their workplace: Long working hours, Unsociable hours (Night-shift working), heavy workload and pressure to meet quotas/targets at work. Responses ranged from 1 (not a problem) to 4 (always a problem).

Musculoskeletal pain was measured using a self-report measure developed by Cox *et al.* (2002:39) in a study measuring the causes and outcomes of stress at work among hospital staff. This measure was subsequently published in a study by

Randall, Griffiths, Cox *et al.* (2002) and is consistent with other self-report measures of musculoskeletal pain (Bernard *et al.*, 1994; Josephsen *et al.*, 1997), which have demonstrated validity and good test-retest reliability. Participants were asked whether they experienced any muscular/ligament/tendon/joint discomfort or pain that was caused or made worse by work in the last 12 months. Responses were categorised as yes or no. In addition, respondents were asked to indicate where the discomfort/pain was located in an open-ended response item.

The completed questionnaires were encoded and analysed using SPSS v.20. Logistic Regression and Odds Ratio were used to test the relationships between the study variables.

RESULTS

Of the 317 respondents, 157 were male and 160 female. A total of 110 (34.7%) respondents were from Sri Lanka, 85 (26.8%) from Indonesia, 71 (22.4%) from India, 22 (6.9%) from Nepal, 20 (6.3%) from India and 9 (2.8%) from Myanmar. The mean age of respondents was 27.7 (SD 5.2) years. The mean number of years of work experience was 1.7 (SD 2.4) years, with a range from 0-12 years and 50% having worked in their present workplace for less than a year. The mean number of years working in Malaysia was 3.8 (SD 2.1) years, with a range from 1-20 years, with 90% of the respondents having worked between 1 and 5 years. Employees worked shifts that were 8, 12 or 14 hours long. The mean shift length was 12.0 (SD 0.4) hours per day.

TABLE 1
Frequencies of Hazard and Musculoskeletal Pain Reporting

	N	No. (%) reporting as 'not a problem'	No (%) reporting as 'a problem'
Smell	317	248 (78.2)	69 (21.8)
Noise	317	198 (62.5)	119 (37.5)
Reliability of machinery	317	249 (78.5)	68 (21.5)
Dust	316	198 (62.5)	118 (37.2)
Toxic substances	316	299 (94.3)	16 (5.0)
Access to PPE	316	311 (98.1)	5 (1.6)
Long hours	317	232 (73.2)	85 (26.8)
Unsociable hours	317	283 (89.3)	34 (10.7)
Workload	317	226 (83.9)	91 (28.7)
Quota	316	266 (35.6)	50(15.8)
Musculoskeletal pain	317	113 (35.6)	204(64.4)

Table 1 summarises the frequency and percentage of respondents exposed to particular hazards and reporting musculoskeletal pain.

From Table 1, it can be seen that of the physical environment hazards, the proportion of individuals reporting exposure that a particular hazard was a problem was highest for noise (37.5%) and dust (37.2%), followed by exposure to unpleasant smells (21.8%), reliability of machinery/equipment (21.5%), exposure to toxic substances (5.0%) and access to personal protective equipment (1.6%). In terms of work patterns, workload (28.7%) was most problematic, followed by long working hours (26.8%), pressure to meet quotas/targets (15.8%) and unsociable hours and night shifts (10.7%).

TABLE 2
Odds Ratios (with 95% confidence intervals) Calculated for Reporting of Musculoskeletal Pain

Hazard	Odds Ratio	95% CI
Smell	1.61	.83 to 2.89
Noise	1.47	.90 to 2.38
Machinery dust	2.07	1.12 to 3.84
Toxins	5.70	1.11 to 2.99
PPE	2.52	.70 to 9.05
Long hours	0.36	0.05 to 2.18
Unsociable hours	2.82	1.56 to 5.10
Workload	2.84	1.14 to 7.08
Quota	3.21	1.78 to 5.80
	4.00	1.74 to 9.24

Over two thirds (64.4%) reported that they experienced work-related musculoskeletal pain.

Table 2 summarises the results of logistic regression analyses on the risk factors for musculoskeletal pain. From the table, it can be seen that for physical environment hazards, those who were exposed to dust were 5.7 times more likely to report musculoskeletal pain than those not exposed, while those reporting the reliability of machinery/equipment as problematic were 2.07 times more likely to report musculoskeletal pain than those who did not report machinery/equipment as problematic. Other physical environment hazards failed to reach significance. All items for work patterns achieved significance. This was highest for those reporting pressure to meet quotas (OR=4.00), followed by workload (OR=3.21), unsociable hours (OR=2.84) and long working hours (OR=2.82).

DISCUSSION

The present study was one of few to examine the influence of physical environment hazards and work patterns on musculoskeletal pain among migrant workers in the manufacturing sector in Malaysia. The results showed that musculoskeletal pain was not uncommon among this group of workers, with over two third reporting having experienced musculoskeletal pain that was caused or made worse by work in the last 12 months. These figures are significantly higher than the reported 28% for Malaysian workers but are somewhat lower than that reported by Chandrasakaran *et al.* (2003) where 83.4% of over 500 semiconductor assembly line workers in Malaysia reported musculoskeletal symptoms in the last year. The reason for the possible decline in symptom reporting in the present study compared to that conducted in 2003 is that access to personal protective equipment may have improved with time as few employees reported this as a problem. Another possible reason is that more effective training on the use of equipment/machinery and injury prevention measures may have also been introduced over time. Nevertheless, the significant odds ratio for equipment/machinery suggested that the lack of reliability of machinery/equipment remains a significant risk factor for MSDs. Moreover, exposure to dusts also increased risk for musculoskeletal pain.

Similarly, employees subjected to difficult work patterns such as high workload, long and unsociable working hours and pressure to meet quotas/targets

were at an increased risk for musculoskeletal pain. Workload is said to have a direct effect on the presence of musculoskeletal pain. This is consistent with the study conducted by Bystrom *et al.* (2004) on Swedish assembly plant workers, which found that appraised workload had a unique effect on musculoskeletal symptoms from the neck, shoulder and upper and lower back.

Findings on working hours of the present study were consistent with findings from a study by Trinkoff *et al.* (2006), who found that work schedule independently increased nurses' risk of developing MSDs. An important finding of the latter study is that mandatory overtime was linked to increased prevalence of MSDs, with increasing risk of injury as time wore on. Working with less than 10 hours off between shifts and pressure to work in order to relieve staffing shortages from supervisors were both found to be directly related to all types of MSDs. Working long hours and night shift working are said to encroach on recovery and recuperation during and between workdays (Hughes & Stone, 2004; Sluiter *et al.*, 2003). In the present study, pressure to meet targets/quotas posed the highest risk for MSDs, suggesting that musculoskeletal disorders were not only related to the temporal elements of work, but that there was an additional psychological component that interacted with the temporal element to produce increased risk. Future studies should examine this relationship in more detail.

The present study is not without limitations. As one of the few studies

on musculoskeletal disorders in the manufacturing sector conducted in Malaysia, there is much scope for further research in the area. Future studies should examine the role of other psychosocial variables at the level of the organisation such as organisational culture, safety culture, social support, relationships at work, among others, in order to gain a broader understanding of the biopsychosocial mechanisms underlying the development of musculoskeletal disorders. Further, a more detailed examination of individual level characteristics which may mediate the experience of musculoskeletal pain should be examined, such as Type A behaviour pattern, fatigue, motivation and energy (Bystrom *et al.*, 2004). The measure of musculoskeletal pain in the study is a simple general index of experienced pain. Ideally, a measure of musculoskeletal pain should encompass a range of body regions and pain rating intensity. Because the survey instrument had to be verbally administered due to literacy issues, a simple appraisal of general pain was preferred. Nevertheless, the reliability and validity of self-reported musculoskeletal pain assessed by survey method has been deemed acceptable for the purposes of assessing risk factors (Kaergaard *et al.*, 2000). Furthermore, the cross-sectional nature of the study did not allow a clear causal relationship between work factors and musculoskeletal pain to be established. Future studies should therefore endeavour to adopt a longitudinal design in order to ascertain causal relationships.

CONCLUSION

The contribution of the present study, however, is significant in that little is known about the experience of musculoskeletal disorders in the manufacturing sector in Malaysia and, therefore, these findings contribute to our knowledge of the problem. Indeed, the incidence of musculoskeletal pain reported is alarmingly high and suggests that the occupational health of migrant workers in the manufacturing sector of Malaysia is considerably at risk. In order for Malaysia to sustain its manufacturing industry over the long term, interventions to manage and prevent musculoskeletal disorders are vital. Prevention efforts should include a transition to more healthful and reasonable working hours, scheduling practices as well as a general improvement in the physical environment of factory premises.

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Factors Affecting the Effectiveness of Alliance Communication in Orchid Consortium in Indonesia

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ABSTRACT

An application of public goods-based theory that describes the process of alliance based, inter-organizational communication and information public goods. Bureaucratic organisations which develop Indonesia floriculture promote alliance by the activation of networking as a forum for coordination. One of them is an orchid consortium. This is a new cooperation system which is developed to synergize various drive components in the orchid floriculture development. The research objective is to identify factors influencing the effectiveness of alliance communication in the orchid consortium. The research framework was organised around Monge's: the goods, the participants and the action processes. This study used census and sample design as a source of information drawn from the entire population. Primary data were collected from individual consortium participants using a questionnaire to identify relationships and communication networks. The Spearman Rank correlation statistics was used to analyse the relationship between the variables, while Ucinet 6 software was used to assess the activity of the communication network in the consortium. Increasing of individual resources through non-formal education and kinds of knowledge; increased use of connective and communal goods including communication media types and frequency of communication media use; and improvement of the collective action process, the importance of density and centrality in improving the effectiveness of organizational communication within the consortium orchid as a coordination among stakeholders in the national orchid floriculture development which are competitive and sustainable. All the hypotheses were accepted.

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INTRODUCTION

Alliance is a cooperation of several associations, groups, organisations or among countries to achieve the desired goal (Osborn & Hagedoorn, 1997). Inter-organisational cooperation includes alliance strategic, consortium, partnerships, coalitions and various forms of network organisation (Ring & van de ven, 1994).

Inter-organisational field is one of the major perspectives that has been employed to examine strategic alliance and networks (Osborn & Hagedoorn, 1997). Kumar and van Dissell (1996) argued that inter-organizational information systems as a public goods constitute of the essential infrastructure on which strategic alliances are built. The pattern of alliance and networks can be money, information, materials and messages (Monge & Contractor, 1998).

Orchid consortium is a new form of coordinated, collective actions, cooperation among associations of orchid farmers and other stakeholders. It was built in order to increase the contribution of orchid farms to the national economy and competitive orchid production (DBPF, 2012).

This finding is consistent with van den Ban (1997) who stated that the problems of farmers need to be solved collectively. Rogers (1976) suggested that agricultural communication problems, consisting entirely of people, institutions, forces, processes and situations, are associated with many structures and other complex processes. Additionally, Leeuwis (2009) stated that the most innovation which is needed currently has a collective dimension

such as requirement of new forms of interaction, organisation and agreement among many actors through connectivity such as physical, social, institutional, individual (Monge *et al.*, 1998), as well as geophysical and technological (Kolb, 2008). Teamwork through support effective and strong institutions will be able to spur the growth and competitiveness of the agribusiness systems (Saragih, 2010).

Orchid consortium is a pre-competitive and shared value creation of alliance model. Consortium is a pre-competitive alliance because 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. Orchid consortium is also an alliance of shared value creation model because it allows partners to provide better service together in order to compete as a team in the product market.

In an effort to implement an alliance or consortium of orchids that can compete in the product market, it is necessary to support the effectiveness of inter-organisational connectivity in the forms of information and communication systems based alliances among organisations. This form is required in order to increase orchid floriculture development.

A review of previous studies in the field of organisational communication in external communication related to cooperation is

found as follows: factors in the cooperation development (Browning *et al.*, 1995; Lee *et al.*, 2014; Misener & Doherty, 2013; Ucakturk *et al.*, 2012), partnership failure factors (Browning *et al.*, 1995; Shrestha *et al.*, 2008; Alwi, 2007), organisational model of collaboration (Sarinastiti, 2004), strategic alliances (Amrantasi, 2008; Genc *et al.*, 2012), and collaboration technology (Gallupe *et al.*, 1992; Sarinastiti, 2004). However, the study object focuses more on studying cooperation outside the agricultural sector (Browning *et al.*, 1995; Shrestha *et al.*, 2008; Amrantasi, 2008; Lee *et al.*, 2014; Misener & Doherty, 2013). In terms of methodology, these studies have not developed the organisational communication research in the application of the theory in particular external communication (Salem, 1996). Therefore, it becomes important for communication science to have contributed to the study of organisational communication in external communication support agricultural development through the application of the theory.

The research question is, “What are the factors affecting the communication effectiveness of alliance? Using a conceptual framework drawn from the previous research and literature on alliances and inter-organisational communication, the authors examined the relationships between connectivity and communality of goods, characteristic of participant, collective action and social network and communication effectiveness of alliance. Extending Monge’s *et al.* (1998) work, the authors focused specifically on

inter-organisational communication and information system of orchid consortium in Indonesia. First, the authors reviewed the relevant literature for factors influencing the communication effectiveness of inter-organisational communication. Next, methods and procedures for conducting this quantitative study were outlined. Finally, the results and the implications are also discussed.

LITERATURE REVIEW

This theory application research is based on Inter-organizational Communication and Information (ICI) System for Producing Public Goods in Alliances (Monge’s *et al.*, 1998). Public good is anything that results from a collective action by interested parties that possess two defining characteristics “impossibility of exclusion and jointness of supply” (Monge *et al.*, 1998). Marwell and Oliver (1993) described four key affecting factors regarding collective action in public goods, as follows: (1) the characteristics of the good; (2) the characteristics of the participants; (3) the collective group of participants and (4) the characteristics of the action processes.

The Monge’s model of alliances based on the ICI system that produces public goods is based on Marwell and Oliver’s (1993) four-part frameworks consisting of the good, the participants, the group and the action processes.

The first framework is the characteristics of connective and communal collective goods. Based on Fulk *et al.* (1996), the ICI system is two classes of public goods named

connectivity and communality. Connectivity as a public good is the ability to reach other members of the inter-organisational collective (e.g., participants in the alliance) through the ICI system. A system is fully connective if each member can reach other member through direct communication. Communality as a public good refers to collective storing and sharing information such as through an electronic bulletin board or an expert database to which users have full, unrestricted access. Communality is created when participants exchange information through shared databases. Monge's propositions 1 and 2 predict that the total resources contributed will impact organisational effectiveness.

PROPOSITION 1. Over time, increases in the provision of connectivity through an alliance-based ICI system will be associated with increases in organisational effectiveness in the form of overall (a) quality of information available, (b) amount of information generated, and (c) member satisfaction with the process.

PROPOSITION 2. Over time, increases in the provision of communality through an alliance-based ICI system will be associated with increases in organisational effectiveness in the form of overall (a) quality of information available, (b) amount of information generated, and (c) member satisfaction with the process.

The second framework is the characteristics of participants. Monge *et al.* (1998) and Marwell and Oliver (1993) stated that to produce public goods, the ICI system also depends on participant's interest, as well as costs and resources contributed. The likelihood of contributing is related to the level of interest in seeing the good realised. Costs for the physical system typically include hardware, software and the application of political or other resources to induce expenditure of the necessary financial resources. Social connectivity and information contributions require a different set of costs, including both subjective and objective factors. They include such things as learning how to use the new system, making useful contributions to the database, compiling informations, giving up established ways of doing things, developing new ways of working, as well as developing and maintaining the interactive social networks required to use the system. Participants choose how much information resources they will contribute to an alliance based public goods. Key information resources include data, knowledge and human intelligence.

PROPOSITION 3. Over time, increases in participant interests in an alliance-based ICI system will be positively related to increases in participant gains.

PROPOSITION 4. Over time, decreases in the participant costs associated with using a new alliance-based ICI system will lead to increases in participant gains.

PROPOSITION 5. *Over time, increases in the anticipated and/or actual use of the system by a participant's key collaborators will lead to increases in participant resources contributed.*

The third framework is characteristic of the group. Characteristics of the group of the ICI system for producing public goods are heterogeneity and group size. Heterogeneity of interests (ability to benefit) and resources (ability to contribute) across participants affect collective action. Participants with the greatest interest in the shared good will contribute the most, while those with the least interest are most likely to free ride on others' contributions. Similarly, those with the least resources are least likely to contribute to collective action. Group size refers to the size collective to prevail in creating a public good.

PROPOSITION 6. *Over time, across participants in ICI systems, greater interest heterogeneity will be associated with increases in the amount of resources contributed toward connectivity and communality within an ICI system.*

PROPOSITION 7. *Over time, higher correlations between resources and interests where resources and interests are heterogeneous will be associated with increases in the amount of resources contributed toward connectivity and communality within an ICI system.*

The fourth framework is the action process. The factors that relevant for the action process are collective decision

and action, network density and network centrality. Collective decision refers to the process of communication in coordination. Network density refers to the proportion of organisations in the network to which an organisation is directly connected. Network centrality is the sum of the length of the shortest paths by which an individual or organisation typically "reaches" or connects to every other individual or organisation.

PROPOSITION 8. *Over time, increases in the density of extant communication networks for each organisation will lead to increases in the amount of resources contributed toward connectivity and communality within an ICI system.*

PROPOSITION 9. *Over time, increases in the centrality of communication networks for each organization will lead to increases in the amount of resources contributed toward connectivity and communality within an ICI system.*

Alliance communication in orchid consortium organised around Monge *et al.*'s (1998) three of four frameworks in Inter-organizational Communication and Information System (ICIS) for Producing Public Goods are the good, the participants and the action processes.

The identification of variables that influence the effectiveness of alliance communication in the orchid consortium is based on individual unit analysis. Figure 1 serves as an organising framework for both the theoretical discussion and the subsequent testing of hypotheses.

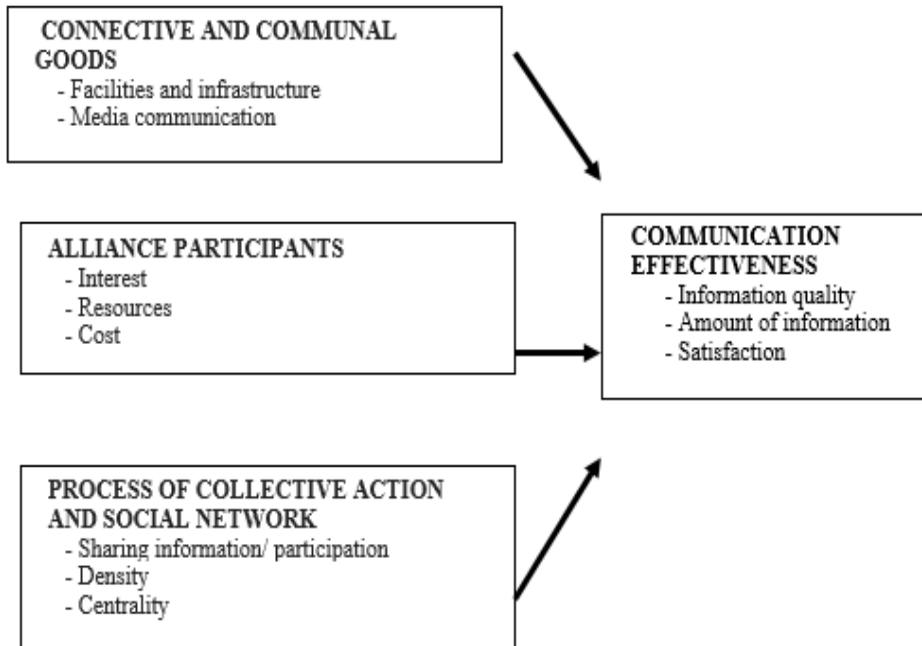


Fig.1: Factors associated with communication effectiveness

METHODS

The research hypotheses are as follows:

- H1: There is a correlation between the level of connective and communal goods characteristics and organisation's communication effectiveness.
- H2: There is a correlation between the attribute of characteristic of participant and organization's communication effectiveness.
- H3: There is a correlation between social networks and collective action and organization's communication effectiveness.

Participants and Procedures

The study population consisted of 28 individuals or representative participants

of Indonesia Orchid Consortium members from seven cities including Jakarta, Bogor, Depok, Bandung, Cianjur, Yogyakarta and Malang in Indonesia. The participants were all of those population members with various professions, i.e. academicians, researcher, policy maker, farmer, trader, etc. They were recruited to complete the mail questionnaire with the response rates of 100% over a 6-week period. After the initial mail invitation, the author called the participants to remind them about the questionnaire.

The questionnaire items consist of questions relating to the availability of supporting infrastructure, the type of communication media, frequency of the use of communication media, interest level, formal education, informal education, the

amount of knowledge contribution, the amount of cost contribution, collective action, density of communication network, local centrality, global centrality, betweenness centrality, quality of information, quantity of information and communication satisfaction.

Measurement and Analysis

Connectivity and communality are described by the availability of facilities and infrastructure support, quality of facilities and infrastructure support, quantity of communication media used by participants and frequency of using the communication media.

The characteristic of participant is described by level of interest, level of formal education, level of informal education, amount of knowledge contribution and amount of cost contribution.

Social Networks and Collective Action. The factors that are relevant for the action process are collective decision and action such as sharing information/participation, network density and network centrality.

The validity test of the instrument was conducted using the Pearson product moment correlation ($r=0.401-0.995$). The reliability test was done by using the Cronbach alpha method (value 0.783-0.964). The unit of analysis is individuals. The primary analyses were Spearman Rank Correlation (SRC). These analyses were used to determine the relationship between the variables of ordinal scale data. Ucinet 6 software used to assess the activity of the communication network in the consortium.

RESULTS

Results of the relationship between Connective and Communal Goods Characteristics, Alliance Participant Characteristics, Process of Collective Action and Social Networking and Alliance Communication Effectiveness by Spearman Rank correlation statistics are shown in Tables 1, 2 and 3.

DISCUSSION

Goods' Characteristics versus Communication Effectiveness

Data in Table 1 show that there is a significant correlation between the quantity of channels, the quantity of information and satisfaction in the process. It means that more than one alternative channel used by members to find information and connect with other consortium members, the more information can be extracted by the consortium members and the more satisfied they are with the communication process. The finding demonstrated an association between frequency in using channel with the quantity of information and satisfaction in the process. This is in line with Monge's (1998) and Marwell and Oliver's (1993) results which indicate that the information and communication systems for the production of public goods in the alliance are affected by connectivity or the ability to reach out to other alliance members. Connectivity information system (Child & Shumate, 2007) will increase the effectiveness of communication. The use of the media must to be adjusted to the needs because the media have different capacities

TABLE 1

The correlation between the characteristics of connective and communal goods with communication effectiveness

Connective and communal good characteristics	Communication effectiveness		
	Information Quality	Information Quantity	Satisfaction
Level of facilities and infrastructure supported availability	0.304	0.190	0.154
Level of facilities and infrastructure supported quality	0.274	0.181	0.261
Quantity of channel	0,234	0.455*	0.503**
Frequency in using channel	0.290	0.474*	0.466*

Note: * significantly correlated at $p < 0.05$ and ** highly significant correlated at $p < 0.01$

TABLE 2

The correlation between participants' characteristic and organisation's communication effectiveness

Participants' characteristics	Communication effectiveness		
	Information Quality	Information Quantity	Satisfaction
Level of interest	0.301	0.241	0.178
Level of formal education	0.114	0.071	0.095
Level of non formal education	0.254	0.404*	0.331
Amount of knowledge contribution	0.192	0.425*	0.428*
Amount of cost contribution	-0.098	0.102	0.228

Note: * significantly correlated at $p < 0.05$ and ** highly significant correlated at $p < 0.01$

TABLE 3

The correlation between social networks and collective action with Organisation's communication effectiveness

Social Networks and Colective Action	Communication effectiveness		
	Information Quality	Information Quantity	Satisfaction
Collective action	0.609**	0.729**	0.687**
Density	-0.426*	-0.511**	-0.568**
Local Centrality	0.572**	0.607**	0.626**
Global Centrality	-0.316	-0.221	-0.123
Betweeness Centrality	0.493**	0.431*	0.453*

Note: * significantly correlated at $p < 0.05$ and ** highly significant correlated at $p < 0.01$

in sending data (D'Urso & Rains, 2008). The more varied the information media/channels used to support communication, there will be more ways to establish

communication between members of the alliance. By frequently and continuously increasing the contribution in using media and communication, social connectivity

and satisfaction will be achieved in the communication process. The infrastructure is most commonly used by members of the alliance to access mailing list, e-mail and SMS. SMS and email are channels chosen for personal relationship, while mailing list as one of the collaborative information and communication systems that built alliances to share information among members of the consortium. The communication media is most widely used as a forum for finding and sharing information. Gallupe *et al.* (1992) and Sarinastiti (2004) and Walsham (2002) stated that supportive collaboration system and computer system will increase the quantity of information. Communication media such as e-mail and mailing list will increase the number of ideas by reducing social barriers and can serve as the media for consultation among its members.

Participants' Characteristics versus Communication Effectiveness

The findings presented in Table 2 show that there is a relationship between the level of informal education with the quantity of information. It means the more informal education such as training course in all aspects of orchid agribusiness industry (e.g., GAP/SOP, cultivation, management, cloning which have been followed by members of the alliance), the more information and knowledge about orchid agribusiness are controlled by the members of the alliance and can be used as materials for other members. Baumann and Bonner (2013) argued that the most valuable in group is expertise. Browning *et al.* (1995) suggested

that expertise increases the likelihood of success. The finding also shows that there is a relationship between the quantity of knowledge and the quantity of information and satisfaction in the process. In other words, the more the data, information and knowledge provided by the alliance members in various aspects of the agribusiness of orchid (i.e. propagation system, technology, marketing, human resources, institutional, regulatory and policy management), the more information can be obtained by other alliance members in orchid agribusiness. The more amount of knowledge can be contributed and discussed in the meeting and the discussion on the mailing list, the more things can be discussed and there will be a solution to solve the problem in order to achieve satisfaction in the communication process. Penley (1978) argued that the combination of diverse viewpoints and varied types of knowledges would lead to a better solution to a complex problem. The source of information or knowledge is a power and an important resource for the success of the organisation (Tsai, 2000; Minei & Bisel, 2013). Research on sharing information has found a positive relationship (Mohr & Spekman, 1994; Lee *et al.*, 2014) between the quantity of information that contributes to members' satisfaction of the communication process.

Collective Action and Social Networking versus Communication Effectiveness

The results in Table 3 show that there is a significant correlation between the process of collective action and communication

effectiveness (i.e., the quality of information, quantity of information and satisfaction in the process). This means that the higher the level of participation contributed (attendance and contribute ideas), the more decision making by deliberation and consensus in meetings will improve the quality of information (i.e., quality of information obtained both time and accuracy in the content and suitability based on need), the quantity of information (i.e., the amount of information, ideas, responses given by members of the consortium and members' satisfaction in the communication process). This is in line with the statement of Marwell and Oliver's (1993) that the process of collective action will be increased through coordination and collective decision-making. Research on collective action process found a positive relation between coordination and members' satisfaction (Mohr & Spekman, 1994; Kauffeld & Lehmann, 2012, Child & Shumate, 2007) but no support for the relation between satisfaction and members' participation (Mohr & Spekman, 1994).

Research on social network (Table 3) shows that there is negative correlation between density and effectiveness of communication. Communication was more intense in high complexity issues than in low complexity issues. It showed that alliance members more strongly ties to one another when there were high complexity problems that need to discuss or to solve by all members than in low complexity problems. It shows that ties among the members are dynamic and the relationship

among them are interdependent. Research on collective action found positive (Mohr and Spekman 1994) for correlation between interdependent and member satisfaction.

Results on centrality (Table 3) revealed a positive correlation between centrality (degree and betweenness) and communication effectiveness. This means that: 1) the more relationships possessed by a member, the more the alternative ways to meet the needs of information possessed and there is less dependence on mediators, 2) the more members in a consortium can act as mediators for the institution they represent, the better the information will be conveyed to others, and 3) the more information that can be contributed and the easier it is to communicate with other members.

CONCLUSION

Variables that really connect to information system and inter-organisational communication are the kinds and frequency of communication media, level of formal education, level of informal education, collective action process, local centrality and density. Thus, it can be concluded that the 1st, 2nd and 3rd hypotheses are accepted.

Information and communication systems among orchid inter-organisational consortium include: a) collective and communal goods, b) individual resources (informal education and kinds of knowledge); c) group resources, and d) process of collective and social process. These factors can influence communication effectiveness, and thus, be considered as

basic components for decision maker to increase orchid consortium effectiveness.

This study highlights the need to increase the use and frequency of interpersonal communication media and hybrid media, especially participating actively in sending technology information, report of events, and research report. We encouraged the participants to improve their interactive approach continually in duty, social and emotional aspects by discussing all the subjects in the mailing list to reach communication effectiveness in the quantity and quality of information and also communication satisfaction.

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The Relationship of Work-Family Conflict and Socio-Cognitive Variables to Healthy Eating in Malaysia

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ABSTRACT

Understanding psychosocial determinants of healthy eating is believed to be crucial because they are influences that are potentially modifiable through health intervention. The current study was designed to investigate the effects of work-family conflict and socio-cognitive variables on healthy eating (i.e., low fat consumption, and fruit and vegetable consumption) among Malaysian employees. Participants (N = 325) completed questionnaires based on the Theory of Planned Behaviour (TPB) constructs and the work-family conflict scale. Results based on multiple regressions highlighted the efficacy of TPB in explaining 42% and 44% of the variances for eating low fat and eating fruit and vegetables, respectively. In addition to intention, descriptive norm and anticipated regret were found to be statistically significant predictors of both the healthful eating behaviours. Self-efficacy was a significant predictor of low fat consumption, while affective attitude was a significant determinant of fruit and vegetable intake. Family interference with work (FIW) was found to moderate the effect of intention on low fat consumption, suggesting that intention was predictive of low fat consumption only among people who experienced less FIW and not among those with greater conflict. Intervention could usefully target the socio-cognitive variables and work-family challenges in promoting healthful eating in Malaysia.

Keywords: Healthy eating, socio-cognitive variables, Theory of Planned Behaviour, work-family conflict.

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INTRODUCTION

The importance of healthy eating in contributing to an overall sense of wellbeing and in reducing the rate of diseases, including chronic disease, has been well established (Hall *et al.*, 2009; Bogers *et al.*, 2004). Yet

in Malaysia, results based on the World Health Survey (Hall *et al.*, 2009) showed that low fruit and vegetable consumption was prevalent among men (85%) and women (85.5%). Moreover, statistics from the last few decades suggested that as the Malaysian population achieved affluence, their intake of energy, fats, and sugars increased (Ismail *et al.*, 2002). Urbanisation and industrialisation have brought about a shift towards a 'westernised' dietary pattern and food consumption in Malaysia (Tee, 1999). Furthermore, in recent decades, the Malaysian national surveys have highlighted a rapid rise in obesity rates (Khor, 2012). Such circumstances make healthy eating an important issue for health promotion and disease prevention. While little is known about dietary habits of the Malaysians, previous studies on healthy eating in Malaysia have focused their attention on consumption patterns (Mirnalini *et al.*, 2008; Nurul Izzah *et al.*, 2012) and socio-demographic determinants (Yen, Tan, & Nayga, 2011; Yen & Tan, 2012). While demographic factors may account for a significant portion of the variance in these eating behaviours, these variables are not directly amenable to change (Christian *et al.*, 2007). In this context, the psychosocial determinants of healthy eating are crucial because they are influences that are potentially modifiable through health intervention. Therefore, it is important to understand them to develop an effective programme for the promotion of healthy eating (Povey *et al.*, 2000). Thus, the current study aimed to investigate this issue.

Work-Family Conflict and Eating Behaviour

Striking changes in the nature of family and work life, such as more dual-career couples and the rising numbers of working mothers with young children, have increased the likelihood of employees of both genders experiencing work-family conflict, in an attempt to occupy work and family roles simultaneously. In Malaysia for instance, previous studies (Ahmad, 1997; Mahpul & Abdullah, 2011) suggested the prevalence of work-family conflict among working mothers. Work-family conflict occurs when efforts to cater to work role demands interfere with one's ability to fulfil family demands and vice versa (Greenhaus & Beutell, 1985). Such a conflict occurs in either one or both directions, where one could experience work interference with family (WIF) and/or a family interference with work (FIW). Stress and time availability perspectives (Allen & Armstrong, 2006) provide a conceptual basis to suggest the fact that conflicts between work and family life are likely to constitute barriers for healthy food habits (Roos *et al.*, 2007). In a qualitative study examining the influence of conflict between work and family obligations on employed parents' own dietary choices, Devine *et al.* (2006) observed that less healthful food was selected not only because it was fast and easy to obtain or prepare, but also because it was viewed as a reward to make up for a difficult day. In addition, there is evidence that consuming healthy foods such as fruits, vegetables, and fiber may be thought of as inconvenient (Allen & Armstrong, 2006).

Previous Western studies suggest that work-family conflicts are important stressors, contributing to poor eating habits (Allen & Armstrong, 2006; Lallukka *et al.*, 2010; Roos *et al.*, 2007). The concept of WIF and FIW may have different effects on eating. Studies have revealed that the direction of the work-family conflict (i.e., WIF and FIW) influences the nature of eating behaviour (Allen & Armstrong, 2006; Roos *et al.*, 2007). For instance, Allen and Armstrong (2006) found that FIW was associated with eating more fatty foods, while WIF was associated with eating fewer healthy foods. They suggested that individuals experiencing WIF might not make the effort to include more healthy food including fruits and vegetables in their diet based on the belief that it would be another drain on their time and energy. On the other hand, FIW may elicit more of a stress-induced response to food choices that prompts individuals to use fatty foods as a comfort mechanism. Yet, no previous studies have examined the association between work-conflict and healthy eating in a non-Western country. Hence, it seems prudent to examine whether work-family conflict and its direction have any influence on healthy eating in a Malaysian sample (i.e. representing a non-Western population). This, in turn, would help develop appropriate worksite policies and practices, and nutrition promotion intervention, to assist the dietary behaviour of individuals.

Theory of Planned Behaviour (TPB)

Several social cognition models were developed as frameworks to understand health related behaviours (for details, see Conner & Sparks, 2005), however, the present study focuses on TPB model. TPB (Ajzen, 1991) is one of the most widely applied socio-cognitive frameworks within the health behaviour sector. The model has been used to explain a range of health behaviours (Armitage & Conner, 2001; McEachan *et al.*, 2011), with a view to improving behaviour through interventions (Payne, Jones, & Harris, 2005). According to TPB, the proximal determinant of behaviour is a person's intention to perform the behaviour itself (Ajzen, 1991). Intention represents a person's motivation to perform the behaviour, such that, the more one intends to engage in a particular behaviour, the more likely it is to occur. In turn, intention is theorised to be predicted by three socio-cognitive concepts, namely, attitude [i.e., the individual's evaluation of the behaviour (positive or negative)], subjective norms (i.e., the perceived social pressure to behave, stemming from the beliefs about whether a behaviour will receive social approval), and perceived behavioural control (PBC; i.e., the individual's perception of the extent to which performing the behaviour is easy or difficult). As a construct, attitude has been conceptualised as having both affective and cognitive components (Conner & Armitage, 1998). The affective component of attitude refers to emotions and feelings associated with behaviours (e.g., the enjoyment of eating healthy food), while the cognitive

component is related to the knowledge, ideas, or beliefs related to the behaviour (e.g., the benefit of eating healthy food). Subjective norm, on the other hand, has been distinguished as injunctive norm (i.e., that which the significant others think the person ought to do) and descriptive norm (i.e., what significant others do themselves) because these are separate sources of motivation (Rivis & Sheeran, 2003). According to Ajzen (2002), PBC is also used as a two-dimensional construct comprising self-efficacy (i.e., the extent to which performance of the behaviour is perceived as easy or difficult for the individual) and perceived control (i.e., the extent to which the individuals perceive the performance of the behaviours to be within his or her control). Acknowledging the fact that the sources of attitudes (i.e., affective and cognitive), subjective norms (i.e., subjective and descriptive) and PBC (i.e., self-efficacy and perceived control) are important in behavioural interventions, the present study sought to test if these variables had independent effects on healthy eating.

Furthermore, a meta-analysis of TPB (Sandberg & Conner, 2008) provides support for the inclusion of anticipated regret in the TPB. Anticipated regret refers to a negative, cognitive based emotion that is experienced when we realised or imagined that the present situation could have been better if we had acted differently (Conner & Sparks, 2005). With the exception of physical activity (Abraham & Sheeran, 2004), studies have examined if *regret* alters expectations about health-risk behaviours and screening

behaviours (Sandberg & Conner, 2008). Such studies suggest that anticipated regret is a salient predictor of such behaviour, since engaging in such behaviours is generally understood to have detrimental effect on individuals' health. Thus, individuals are likely to experience unpleasant or negative emotions, including regret, when they indulge in health-risk behaviours or screening behaviours (Sandberg & Conner, 2008). However, to our knowledge, until now, the possibility that anticipates regret may influence healthful eating has not been examined. This study attempts to fill this void.

Theoretically, the integration of research on work-family conflict with the TPB framework will benefit stress research by specifying some important cognitive mechanisms through which stress may affect eating behaviour. The knowledge about the link between work-family conflict, cognition, and healthy eating is particularly useful when developing health interventions, particularly targeting those who face stressful conditions, as individuals' behaviour-specific cognitions are modifiable antecedents of behaviour. Louis *et al.* (2009) studied the effects of life stress (i.e., normal range of stress) on the intention to eat a healthy and unhealthy diet, in relation to the TPB, in a sample of 154 university students. Other research (e.g., Payne *et al.*, 2005; Payne *et al.*, 2010) has integrated work stress into the study of the TPB model in the exercise and healthy eating domains. Payne *et al.* (2002), for instance, found that the presence of stressor

(i.e., job demands) appeared to impede people's ability to carry out their intentions to perform exercise. In further research, Payne *et al.* (2010) also showed that job demands appeared to disrupt people's ability to carry out their daily exercise intentions. Owing to the importance given to intention as the key determinant of behaviour (Payne *et al.*, 2010), this study incorporates the TPB variable of intention, by investigating the extent to which the WIF and FIW affect the relationship between intentions and healthy eating.

RESEARCH OBJECTIVES

The current study was designed to investigate the effects of work-family conflict and socio-cognitive predictors on healthy eating. In the present study, work-family conflict was divided into distinct, but related constructs, namely, 'WIF' and 'FIW'. Of interest, the present study focused on two aspects of eating behaviour (namely, fruit and vegetables intakes and a low fat diet intake) considered as healthy eating in previous studies (Conner *et al.*, 2002; Povey *et al.*, 2000). Moreover, such dietary behaviour was thought to be vulnerable to deleterious changes in response to stress in the literature (O'Connor & Conner, 2011). The specific aims of this study were as follows:

1. To investigate the possible effects of work-family conflict constructs (i.e., WIF and FIW) on eating behaviour. Based on the previous literature, it was hypothesised that WIF and FIW would predict less healthy eating (i.e., reduction in fruit and vegetable intake and reduction in the consumption of a low fat diet).
2. To examine the role of the TPB in predicting healthy eating among a sample of employees in Malaysia. Of particular interest in the study was the detailed analysis of the different sources of attitudes, subjective norms, and PBC in relation to healthy eating. It was hypothesised that the TPB variables would account for the largest proportion of the explained variance in healthy eating.
3. To examine whether WIF and FIW moderate the relationship between intention and healthy eating behaviours. It was hypothesised that WIF and FIW would moderate the impact of intention on healthy eating, such that experiencing a high WIF and FIW might disrupt the intention to eat more healthy food.

MATERIALS AND METHODS

Participants and Procedures

Participants were a convenience sample of employees from the local government administration in Terengganu. The potential respondents were recruited at their workplaces after informative meetings with representative of the management. In all, 333 respondents completed the questionnaire. However, only 325 (97.5%) returned the completed questionnaires. The respondents included 154 males (47.4%) and 171 females (52.6%). The age of the

respondents ranged from 20 to 61 years [mean \pm standard deviation (SD) = 34 \pm 8.5]. In terms of ethnicity, 73.2% of the participants were Malays, 20.3% were Chinese, 4.9% were Indians, and 1.5% belonged to other backgrounds. About 57% of the participants lived in households with children, ranging from one to a maximum of six children. A majority of the participants (69.8%) worked in the professional field, while the remaining (27.4%) worked in other fields. Ethics Committee of the Institute of Psychological Sciences, University of Leeds, provided ethical approval for this study.

Measures

Participants completed baseline questionnaire on work-family conflict and the TPB measures. One month later, they received a follow-up measure of healthy eating. The original questionnaire in the English version was translated into the Malay language before it was administered to the participants. Back translation of the questionnaire was conducted by two proficient linguists in both languages and having in-depth experiences in culture, jargon, idiomatic expressions and emotional terms of the original language and translated language. As part of content validation procedure, consultation with experts was done to determine the representativeness, specificity and clarity of the questionnaire (see Haynes *et al.*, 1995). Measures included:

Demographic background. Age, gender, marital status, number of children, and job characteristics were compiled for each participant.

Healthy eating. To examine the participants' habits related to eating fruits and vegetables, the following item was used: 'In the past four weeks, I have eaten five fruits and vegetables a day'. For the purpose of this study, participants were informed that eating fruits and vegetables refers to eating at least five portions of fruit and/or vegetables daily. For assessing their habits related to eating a low fat diet, the following item was used: 'In the past four weeks, I have eaten a low fat diet'. The participants were informed that eating low fat diet refers to limiting intake of fatty food and trying to pick low fat-options where possible. Examples of low fat diet were also given. Responses to these items ranged from '1 = never' to '7 = always'.

Work-family conflict. An eight-item scale developed by Gutek *et al.* (1991) was used to measure the two types of work-family conflict. The participants responded on a five-point scale ranging from strongly disagree (rated as 1) to strongly agree (rated as 5). WIF was measured using a four-item scale, with items such as, 'My family dislikes how often I am preoccupied with work while I am at home'. Similarly, FIW was assessed with a scale comprising four items. Higher scores indicated higher WIF and FIW. The corresponding Cronbach's alpha coefficient was 0.723 for the complete scale.

Socio-cognitive variables. The items related to socio-cognitive variables were based on TPB (Conner & Sparks, 2005). The intention to engage in each behaviour was assessed using one item: I intend to eat five fruits and vegetables a day; '1 = strongly

disagree' to '7 = strongly agree'. Cognitive attitude was assessed with one item: Eating five fruits and vegetables a day, over the next four weeks, would be 'worthless-valuable' and 'beneficial-harmful'. For affective attitude, the responses 'not enjoyable-enjoyable' and 'unpleasant-pleasant' were used. Injunctive norm was assessed with the statement: Most people important to me think that I, '1 = should not' and '7 = should', eat five fruits and vegetables a day, over the next four weeks. Descriptive norm was measured using one item: I think that most people who are important to me will eat five fruits and vegetables a day. Responses to this item were rated on a seven-point scale, '1 = strongly disagree' to '7 = strongly agree'. Self-efficacy was measured by a single item: If it were entirely up to me, I am confident that I could eat five fruits and vegetables a day. The item to assess perceived control was: I have control over whether or not I eat five fruit and vegetables a day. Again, responses to these items ranged from '1 = strongly disagree' to '7 = strongly agree'. Anticipated regret was measured by one item: I will feel regret if I do not eat five fruits and vegetables a day, with responses ranging from '1 = definitely no' to '7 = definitely yes'.

Statistical Analysis

Data were analysed using the Statistical Package for the Social Sciences (SPSS). To test the hypotheses, correlation, and hierarchical regression analyses were performed. A series of hierarchical multiple regression analyses were conducted

to determine the predictors of low fat consumption, and fruits and vegetables consumption tendencies of the sample. The independent variables were entered in two steps: (i) All the TPB variables (i.e., intention, self-efficacy, perceived control, cognitive attitude, affective attitude, injunctive norm, and descriptive norm), (ii) anticipated regret, WIF, FIW, and gender. By using this procedure, it was possible to assess the predictive utility of the TPB constructs and the additional predictive utility of all the variables under consideration (Norman & Conner, 2006). Besides gender, demographic variables including age, marital status (married vs. single), and children (no children vs. with children, i.e. having at least one child or more) were included in the initial regressions, but were subsequently excluded as they were not significant predictors. Regression analyses were also performed to examine the moderating role of WIF and FIW on the intention-behaviour relationship. Interaction terms (i.e., intention \times WIF, and intention \times FIW) were constructed based on the recommendations by Baron and Kenny (1986). The nature of the significant interaction was then probed by examining beta weights for the different levels of moderators. For the WIF (median = 12) and the FIW (median = 8) measures, the participants were divided into a low group and a high group, by way of median split. To facilitate the interpretation of the analyses, only two interaction terms were created. The regression analysis was run separately in the two groups to decompose the interaction.

RESULTS

The means and Pearson's correlations for low fat diet consumption, and fruits and vegetable consumption are shown in Table 1 and Table 2, respectively. All correlations between eating behaviours and the TPB components were statistically significant. FIW was significantly related to eating a low fat diet, suggesting that a higher FIW was related to an increased intake of a low fat diet.

Predicting Low Fat Consumption

In the first step, the impact of the TPB variables was analysed (see Table 3). The results indicated that the TPB variables accounted for a statistically significant proportion of the variance in eating a low fat diet [$\Delta R^2 = .42$; F change (7, 293) = 30.58, $p < .001$]. Examination of beta weights indicated that intention, self-efficacy and descriptive norm had significant positive beta weights, while cognitive attitude had a negative beta weight. In Step 2, the analysis of the impact of anticipated regret, WIF, FIW, and gender did not result in a statistically significant increment in the explained variance in eating a low fat diet [$\Delta R^2 = .01$; F change (4, 289) = 2.17, n. s.]. Examination of beta weights indicated that intention, self-efficacy, cognitive attitude (negative beta weight), descriptive norm, and anticipated regret were significant predictors. In Step 3, while intention, self-efficacy, and descriptive norm remained significant, a significant negative interaction was observed in $FIW \times$ intention ($\beta = -.86$, $p < .001$). This interaction led to a

significant improvement in the model [$\Delta R^2 = 0.03$, F change (2, 287) = 8.15, $p < .001$]. Decomposition of the interaction showed that the intention to consume a low fat diet was predictive of those in the low FIW group ($\beta = -.32$, $p < .001$). For those in the high FIW group, the effect was non-significant ($\beta = -.04$, n. s.).

Predicting Fruit and Vegetable Consumption

Hierarchical regression was also performed to predict the effects of the predictors on the consumption of fruits and vegetables. In Step 1 (see Table 3) intention, cognitive and affective attitude and descriptive norm were found to significantly predict fruit and vegetable consumptions. Taken together, these variables explained a significant, 44.4% of the variance in fruit and vegetable consumption [F change (7,292) = 33.31, $p < .001$]. The addition of anticipated regret, WIF, FIW, and gender in Step 2 failed to explain a significant additional proportion of the variance in fruit and vegetable intake [F change (4,288) = .789, n. s.]. In this step, fruit and vegetable consumption was significantly predicted by intention, affective and cognitive attitudes (negative beta weight), descriptive norm, and anticipated regret. Interaction terms were entered in Step 3, descriptive norm and cognitive attitude were significant but no significant interaction was found [F change (2, 286) = .51, n. s.].

TABLE 1
Means, Standard Deviations, Pearson Correlations for low fat consumption variables

variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Behaviour	-											
2. Intention	.58**	-										
3. CAttitude	.20**	.34**	-									
4. AAttitude	.42**	.55**	.58**	-								
5. INorm	.39**	.46**	.43**	.41**	-							
6. DNorm	.49**	.53**	.28**	.55**	.46**	-						
7. PC	.28**	.42**	.28**	.47**	.37**	.39**	-					
8. SEfficacy	.56**	.62**	.39**	.52**	.46**	.46**	.38**	-				
9. Regret	.47**	.58**	.31**	.45**	.47**	.48**	.31**	.46**	-			
10. WIF	.01	-.03	-.04	-.15**	.03	-.09	-.12*	.01	-.04	-		
11. FIW	.13*	.06	.10	.01	-.06	.12*	-.10	.10	.10	.36**	-	
12. Gender	.05	.04	.08	.05	.01	-.00	.03	-.07	.08	-.02	.00	-
<i>M</i>	4.29	4.89	5.72	5.14	5.20	4.83	5.53	5.20	4.87	12.07	9.38	-
<i>SD</i>	1.51	1.50	1.36	1.51	1.43	1.56	1.33	1.47	1.70	3.30	2.77	-

Note: Male=0, Female=1; CAttitude=cognitive attitude, AAttitude= affective attitude, INorm= injunctive norm, DNorm= descriptive norm, SEfficacy= self-efficacy, WIF= work to family conflict, FIW = family to work conflict, * p < .05, ** p < .001.

TABLE 2
Means, Standard Deviations, Pearson Correlations for Fruits and Vegetables variables

variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Behaviour	-											
2. Intention	.67**	-										
3. CAttitude	.12**	.27**	-									
4. AAttitude	.36**	.43**	.70**	-								
5. INorm	.32**	.42**	.55**	.54**	-							
6. DNorm	.51**	.57**	.30**	.45**	.50**	-						
7. PC	.18**	.31**	.20**	.22**	.23**	.25**	-					
8. SEfficacy	.46**	.59**	.35**	.51**	.48**	.53**	.27**	-				
9. Regret	.43**	.48**	.33**	.41**	.43**	.46**	.21**	.52**	-			
10. WIF	-.05	-.04	.14**	.02	.03	-.01	.01	.01	-.02	-		
11. FIW	.08	.04	-.13*	-.04	-.12*	.10	-.00	-.00	.03	.36**	-	
12. Gender	.03	.08	.00	.04	.05	.08	.02	.02	.11*	-.02	.00	-
<i>M</i>	3.60	4.25	5.73	5.33	4.98	4.57	5.33	5.20	4.87	12.07	9.38	-
<i>SD</i>	1.77	1.74	1.40	1.40	1.59	1.57	1.44	1.47	1.70	3.30	2.77	-

Note: Male=0, Female=1; CAttitude=cognitive attitude, AAttitude= affective attitude, INorm= injunctive norm, DNorm= descriptive norm, SEfficacy= self-efficacy, WIF= work to family conflict, FIW = family to work conflict, *p < .05, **p < .001.

TABLE 3
 Hierarchical Regression Analysis Predicting Low Fat Consumption and Fruit and Vegetable Consumption from TPB Measures, WIF, FIW, Gender and Interaction terms.

		Low fat consumption			Fruit and vegetables consumption		
Step 1	Predictors	Step 1 β	Step 2 β	Step 3 β	Step 1 β	Step 2 β	Step 3 β
	Intention	.17**	.16**	.62***	.48***	.45***	.29
	PC	-.05	-.04	.00	-.04	-.04	-.02
	Self-efficacy	.34***	.33***	.35***	.04	.01	.05
	Cognitive attitude	-.14*	-.14*	-.14*	-.23***	-.23***	-.26***
	Affective attitude	.07	.09	.03	.19**	.18**	.12
	Injunctive norm	.07	.05	.06	.03	.03	.03
	Descriptive norm	.20**	.19**	.19**	.15**	.13*	.17**
Step 2	Regret		.14*	.13*		.10*	.07
	WIF		.04	.06		-.01	-.11
	FIW		.02	.02		.03	-.02
	Gender		.03	.02		-.12	-.03
Step 3	Intention x WIF			.01			.10
	Intention x FIW			-.86***			.15

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. β = standardized coefficient. For low fat consumption model, [$\Delta R^2 = .42$, $F(7, 293) = 30.58$, $p < .001$] for Step 1; [$\Delta R^2 = .01$, $F(4, 289) = 2.17$, n.s.] for Step 2, [$\Delta R^2 = .03$, $F(2, 287) = 8.15$, $p < .001$] for Step 3. For fruit and vegetable model, [$\Delta R^2 = .44$, $F(7, 292) = 33.31$, $p < .001$] for Step 1; [$\Delta R^2 = .00$, $F(4, 288) = .78$, n.s.] for Step 2; [$\Delta R^2 = .00$, $F(2, 286) = .51$, n.s.] for Step 3.

DISCUSSION

The current study was novel as it examined the effects of work-family conflict on healthy eating using a non-Western sample. In the present study, the correlation coefficient observed between FIW and a low fat intake was small ($r = .13$, $p < .05$), but statistically significant, suggested that individuals who perceived more FIW had a higher tendency to consume a low fat diet. The result was unexpected since a previous research (Roos *et al.*, 2007) had suggested that women and men with strong family-work conflicts (i.e. FIW) were less likely to report recommended food habits. On the contrary

to Hypothesis 1, however, the result of the regression analyses showed that after the TPB variables were controlled, FIW failed to predict healthy eating. This suggests that FIW may be a distal predictor as TPB mediated its effect on the eating behaviours (Conner & Abraham, 2001). Further research is needed to confirm the weak association between work-family conflict and healthy eating using different samples, and to examine such a mediation effect. Some previous Western studies (Roos *et al.*, 2007; Allen & Armstrong, 2006; Lallukka *et al.*, 2010) have shown a significant association between work-family conflict and unhealthy eating behaviour. The low predictive power

of work-family conflict in the present study may be due to several factors. Firstly, the level of work-family conflict experienced by the Malaysian sample may not be very disturbing or harmful enough to alter the behaviours under study. Secondly, the presence of various important moderating effects (e.g., coping, personality, and social support) that were not addressed in the present study might have influenced the relationship between work-family conflict and healthy eating. Future research could further examine these possible moderators and replicate the study on a broader range of eating behaviours (e.g., meals and snacks intake, unhealthy food intake, skipping meals).

Consistent with Hypothesis 2, this study found that the TPB model tested on each of the healthy eating behaviours was significant. In addition, the percentage of variance it predicted suggested sizeable effects (explaining variances of 42% and 44% for eating low fat food, and eating fruits and vegetables, respectively). This study also corroborated the findings of previous studies (e.g., Armitage & Conner, 2001; McEachan *et al.*, 2011), showing that intention was the strongest predictor of healthy eating. A noteworthy finding in the present study was that, after intention, descriptive norm was a statistically significant predictor of healthy eating among the theoretical determinants, although it was lower in magnitude than that of PBC (i.e., self-efficacy). In addition, while self-efficacy may predict only a low fat diet ($\beta = .35, p < 0.00$), descriptive norm emerged as a significant predictor of

both low fat diet and fruit and vegetable consumption ($\beta = .19, p < 0.00$ and $\beta = .17, p < 0.00$, respectively). These findings contradict to the results of studies conducted on Western samples (Povey *et al.*, 2000), where the effect of PBC predominated the prediction of healthy eating, as compared to normative influences. Such results, as those revealed in the present study, also strengthen previous research (Lee *et al.*, 2006; Hagger *et al.*, 2007), suggesting the effect of social consideration (i.e., descriptive norm) on the behaviour of those from a non-Western background.

Furthermore, affective attitude was a statistically significant predictor of fruit and vegetable consumption, but not of low fat intake. Given that the direction of cognitive attitude on low fat consumption ($r = .20, p < .001, \beta = -.14, p < .05$) and fruit and vegetable consumption ($r = .12, p < .001, \beta = -.23, p < .001$) was different based on correlation and regression analyses, this may suggest that they are merely statistical artefacts. Hence, it is recommended to exercise caution while interpreting these results. Perhaps the most original finding of the present research is that anticipated regret emerged as a reliable predictor of both the healthy eating behaviours, even after the effects of the other TPB constructs had been taken into account. Hence, this finding supports the view that anticipated regret has a motivational significance that can be generalised to the promotion of health protective behaviour, including healthy eating, as well as health risk behaviour (Abraham & Sheeran, 2004). Overall, the

present study has revealed the important role of emotional evaluations (i.e., affective attitude, regret) and social consideration (i.e., descriptive norm) in predicting healthy eating. This indicates that health messages which focus on affective benefits (e.g. I enjoy eating healthy food, I feel regret if I do not eat healthy food), and perception of significant others (e.g., if everyone is eating healthy food, it must be sensible to do so), may serve as useful tools to increase healthful eating in the Malaysian context.

Past research has demonstrated the moderating effects of stress in relation to key TPB variables (Louis *et al.*, 2009; Payne *et al.*, 2005). Consistent with the third hypothesis and past research, the present study found evidence to support the moderating role of the FIW in the relationship between intention and low fat consumption. It was notable that a high FIW changed the predictive effect of the intention to eat a low fat diet. In particular, the intention to eat a low fat diet was only predictive among those who reported a low level of FIW, while it was not a significant determinant among those who reported a higher FIW. This extends the findings of a previous study by Allen and Armstrong (2006), which reported the link between FIW (but not WIF) and increased fat consumption. Such results could be explained by the fact that the psychophysiological responses to stress might influence subsequent eating behaviour (Epel *et al.*, 2001), including a greater preference for nutrient-dense foods, particularly those that are high in fat and sugar (Torres, 2007).

From a practical point of view, the results of this study provide useful information to guide the promotion of healthy eating in Malaysia. First, given that intention, descriptive norm, anticipated regret, self-efficacy, and affective attitude of the TPB model were found to be significant determinants of healthy eating, increasing the salience of these constructs may be one way to promote a healthful eating pattern. Results also demonstrated that the FIW had altered the intention-behaviour links. This suggests that the conflict derived from an imbalance in the work-family relationship reduced the likelihood of eating a more healthy diet, which could consequently influence both weight and health. Hence, a healthy eating intervention should be tailored to address issues related to the work-family balance.

The limitations revealed in the present study are insightful for future studies. The nature of this study may fail to capture the within-subject fluctuations in stress measures, and its influence on predicting behavioural outcomes. Thus, it is recommended that future studies be conducted to examine the effects of work-family conflict within and between individuals, over a number of days. Secondly, the study used self-report measures. Hence, future studies, particularly in prospective designs, may benefit from measures that are more objective. Another important limitation is that a few items from the TPB measures, including eating measures, were measured as a single item. Despite previous research (e.g.) acknowledging the use of single item

measurement for the TPB constructs, it must be noted that such measures could be affected by measurement error (Levy *et al.*, 2008). Thus, future research may benefit from using multiple item measures, which are considered more reliable (Conner & Sparks, 2005). Finally, there might have been a selection bias in the samples due to the convenience sampling. Thus, the lack of randomisation in the selection process of participation affects generalisability of the study findings. It would have been desirable to have employed a larger and more representative sample, suggesting the same for future studies.

CONCLUSION

This study was the first to look at the effects of work-family conflicts and socio-cognitive variables on healthy eating behaviours in a non-Western sample. Findings supported the efficacy of the TPB model, which accounted for the largest proportion of the explained variance in predicting healthy eating in Malaysian samples. This research provides some insight into the fact that after intention, descriptive norm and anticipated regret were statistically significant predictors of healthy eating behaviours. The findings of this study also added novelty to the previous literature regarding the moderating effects of work-family conflict in the intention-behaviour relationship. In more specific, FIW was found to moderate the effect of intention on low fat consumption, such that intention was predictive of low fat consumption only among people who experienced less FIW, but not among those who reported higher conflict. Intervention could usefully target

the socio-cognitive variables and the work-family challenges in promoting healthful eating in Malaysia.

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Computer Anxiety and Attitudes toward Using Internet in English Language Classes among Iranian Postgraduate Student Teachers

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ABSTRACT

This study was designed to investigate the level of computer anxiety and the overall attitudes of Iranian postgraduate student teachers toward using the Internet in English language classes. Using a stratified random sampling, 160 participants (64 males and 96 females) were selected to take part in the study. These respondents were English language teachers who were pursuing their studies in Teaching English as a Second Language (TESL), English Literature, and Linguistics in public universities of Malaysia. A three-part questionnaire consisting of demographic information, Computer Anxiety Rating Scale (CARS) and Internet Attitude Scale (IAS) was administered in the data collection process. A pilot test was also conducted to achieve the reliability of the instruments. In order to strengthen the results, a semi-structured interview was conducted as well. The results indicated that the level of computer anxiety and the attitudes of the respondents toward using the Internet were of a moderate level. The findings of the independent-sample t-test showed significant mean differences between males and females and their level of computer anxiety and also their attitudes toward using the Internet. In addition, findings of the Pearson correlation coefficient revealed a significant negative relationship between computer anxiety and the participants' attitude toward using the Internet in their English language classes. Meanwhile, responses gauged through interview also supported the above findings. In conclusion, to eliminate the computer anxiety of teachers and encourage them to use the Internet

technology in their classes, they should be equipped with sufficient technology skills through training programmes which can convince them about the usefulness of technologies in their instruction and create positive attitudes when using technology in the teaching and learning process.

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INTRODUCTION

For many years, English language teachers have been using grammar-oriented methods with restricted information resources such as textbooks and chalkboards in their classes. Nowadays, the improvement of computer technology has been deemed as a pedagogically beneficial tool in education. Using computers and the Internet in teaching and learning process modifies the way in which instruction is delivered to students. Yang and Chen (2007) stated that using computers and the Internet in language classes helps learners to have access to English language resources. They can learn the four skills, listening, speaking, reading, and writing, through real-world situation.

Despite the progress of computers and internet technology in the field of language teaching and learning, many teachers are still afraid of using computers in their classes. Fear of the unfamiliarity with computers and apprehension of uselessness of them are among the factors that can influence the rejection of using computers by teachers (Gephart, 1982). In a study by Hismanoğlu (2010), teachers mentioned some reasons such as frustration because of the problems in telecommunication, inability to use computers, and inexperience in utilizing the Internet, which prevented them from using computer and internet technology effectively in language classes. Although

teachers' attitudes have a great influence on the successful usage of computers in the classrooms (Sabzian & Gilakjani, 2013), some researchers such as Hardy (1998) and Tsou, Wang, and Tzeng (2006) found that most of the teachers do not have positive attitudes toward computers because they fear using them in their classes. In the same vein, Wilfong (2006) mentioned that many teachers showed high levels of computer anxiety, which were decreased through obtaining experience with computer utilization. According to Ajzen (1988), teachers who choose to use computers and the Internet in their classes behave differently from those who reject them. They know that the information age is developing rapidly; hence, they should equip themselves with dependent skills and knowledge and adapt their teaching methods to new ways of teaching.

Using computers and the Internet in the educational system may be greatly dependent on teachers' attitudes toward information technology. According to Wong (2002), having skills and knowledge in the field of IT alone will not be enough for teachers; they should also possess positive attitudes toward IT. Educators who accept to integrate computers in learning situation believe that this technology will be beneficial for students so as to prepare them in their future workplace (Butzin, 2000; Hopson, Simms, & Knezek, 2002).

The differences between male and female participants in using computers have been demonstrated in many studies. For instance, Raub (1981) found that gender and

computer anxiety are significantly related to each other. Chen (1986) reported that men had more self-confidence, more positive attitudes of interest toward computers and less computer anxiety than women. Based on what Rosen and Weil (1995) stated, gender inequalities in ICT concern not only students, but also teachers. Female teachers are more reluctant to use this technology in their classes. They are more anxious, less confident and less experienced in using computers in their teaching and learning process than their male colleagues. In a study by Chou (2003) on 136 male and female teachers, female teachers showed significantly higher computer and internet anxieties than male teachers.

This study attempted to investigate the level of computer anxiety and the overall attitudes of Iranian postgraduate students toward utilizing internet technology in their English language classes. The participants in this study included postgraduate student teachers from different programmes such as TESL, English Literature, and Linguistics. They were teachers who were pursuing their postgraduate studies in public universities of Malaysia.

In Iran, English is taught as a foreign language (EFL). English language teachers have limited access to computer and internet technology in educational environments (Zamani, 2010). According to Iran's National Document of Development (2006), the government should increase the accessibility to information and communication technologies in schools and universities. As a result of little accessibility to computers

and internet technology, it is hypothesized that after entering an ESL context, most of these teachers face computer anxiety. Therefore, this study attempted to answer the following research questions:

1. What is the level of computer anxiety among Iranian postgraduate student teachers?
2. What is the overall attitude of these Iranian postgraduate student teachers toward the use of internet in English language classes?
3. Is there a significant difference between Iranian male and female postgraduate student teachers and their computer anxiety?
4. Is there a significant difference between Iranian male and female postgraduate student teachers and their attitudes toward using internet in English language classes?
5. Is there a significant relationship between Iranian postgraduate student teachers' level of computer anxiety and their attitudes toward using internet?

Teachers Use of the Internet in Teaching the English Language

Internet technology has obtained immense popularity in educational research in the late 1960s and early 1970s. According to Almekhlafi and Almegdadi (2010), utilizing technology in the teaching process has become as an integral part of successful teaching. Chu and Leung (2003) stated that there are some benefits in using internet technology in higher education institutions

such as low in cost, improving teaching quality, and expanding the accessibility of courses. The influence of internet technology can also be found in the field of language teaching and learning. Kern and Warschuer (2000) stated that today, the internet use has received a great attention among FL and SL educators. Some changes in teaching and learning process via using the Internet in classes can be mentioned as follows: more productivity of students' language performance, more positive attitude toward learning language, utilizing more teaching and learning strategies and more real-life materials (Kongrith & Maddux, 2005; Yeh & Lo, 2005).

Through utilizing the Internet in classes, teachers can help their students to improve their English language via a great source of information. The recent improvements in computer and internet technology have enabled teachers to have access to these beneficial resources. According to Passerini and Granger (2000), interactions among students will improve more through using online courses than in traditional classes. They can use e-mail for practicing the English language as well as through exchanging information with teachers or other students (Thornton, 1997).

Computer Anxiety

Marcoulides (1989) stated that computer anxiety is a fear or apprehension when a person is utilizing a computer or when thinking about the impacts of its use. Researchers such as Desai (2001) and Gaudron and Vignoli (2002) defined

computer anxiety as a type of state anxiety; an emotional response including feelings of apprehension when confronted to a real threat. In the case of computers, it means the feelings of a person when he interacts with computers. Heinszen, Glass, and Knight (1987) described that computer anxiety is the negative feelings and cognitions aroused in real or imaginary interactions with computer-based technology which influence the use of computers and also the performance on tasks that include the utilization of computer technologies. Any form of frustration, unwillingness, or negative thoughts toward the physical existence of a computer can be referred to computer anxiety (Chang, 2005). Based on what Lavasani (2002) mentioned, computer anxiety is a type of emotional and cognitive reactions that individuals indicate when working with computers. This behaviour can be the results of the deficiency of familiarity and the attitudes of individuals toward computer technology as a menacing object (cited in Jahromi, Lavasani, Rastegar, & Mooghali, 2010).

The development of computer technology in the field of education is extended to language teaching and learning. These days, it is necessary for all students and teachers to understand and use computer technologies. Despite the great advances in technology for language teaching like (in particular) websites, blogs, or journals, some teachers still feel insecure or fear when they want to interact with computers. According to Tsou, Wang, and Tzeng (2006), although a lot of countries have spent large amounts

in technology and tried to modernize their equipment, many teachers still do not show interest in using computers in their classes. Having computer anxiety in classes can affect the quality of teaching and learning process. According to Roblyer (2003), the way teachers look at technologies, how they present it, and how they interact with it will influence their utilization of this technology.

Therefore, the level of computer anxiety of both students and teachers is very important in the teaching and learning process. According to some studies conducted by Weil and Rosen (1995) and Bozionelos (2001), computer anxiety is still an important problem in many societies because most of the people have negative feelings toward computer technologies. In a recent study which set out to determine the level of computer anxiety of Iranian EFL learners, Seyyedrezaie, Ghapanchi, and Seyyedrezaie (2013) found that among 120 participants, thirty-eight of them had low computer anxiety and 45 of them indicated moderate/high computer anxiety. In another study, Jalali (2012) found that Iranian EFL learners revealed moderate level of computer anxiety. Moreover, in a study by Cocorada (2014) on pre-service and in-service teachers, both groups of teachers were found to indicate their anxieties towards computer and internet usage, in which for most participants the levels of anxiety were moderate.

Gender and Computer Anxiety

Gender is as an important determinant in relation to computer anxiety. There are

a lot of studies showing contradictory results in the difference between gender and computer anxiety of individuals. Most studies investigating on computer anxiety and gender, especially those that focused on pre-service teachers, showed higher levels of computer anxiety for females than for males (Aust, Newberry, & O'Brien, 2005; Ayersman & Reed, 1996; Broos, 2005; Colley & Comber, 2003; Cooper, 2006; Cooper & Weaver, 2003; Todman, 2000; Todman & Day, 2006).

However, some studies demonstrated that there is no significant difference between gender and their computer anxiety. For example, Kotrlik and Smith (1988) found that no significant difference existed between male and female vocational teachers' computer anxiety. In their study, Rosen and Maguire (1990) reported that women displayed slightly more, but not significantly more, computer anxiety than men. In a study by Igarria and Parasuraman (1989), no significant relationship was found between participants' gender and computer anxiety. Inconsistent results in relation to gender and computer anxiety demonstrate that gender gap is a controversial variable which should be investigated in different contexts.

Attitudes toward Using the Internet in English Language Classes

Computer and internet technology are an essential part in the teaching and learning process. Attitudes of teachers and students greatly influence the use of technology in classes. Due to the rapid

advancement of internet technology, most of the researchers have shifted the focus of research from individuals' computer attitudes to individuals' internet attitudes. For example, in one study, Asan and Koca (2006) examined students' attitudes toward the Internet and deduced that most of the students had positive attitudes toward utilizing it. Atai and Dashtestani (2011) conducted a study on Iranian undergraduate students and EAP (English for academic purposes) instructors in order to investigate their attitudes toward using the Internet in EAP courses and concluded that all these participants showed positive attitudes toward internet use. They mentioned the Internet as a good source for developing students' reading comprehension skills. In a study by Ramírez, Cañedo, and Clemente (2012) on secondary teachers, over half of the teachers agreed or strongly agreed with internet use in classrooms. They believe that using the internet in classrooms has educational values for the students.

The significant reason in studying the attitudes of teachers toward computer and internet technology use is that it can be a major predictor of future technology use in classrooms (Myers & Halpin, 2002). According to Watson (1998), the development of positive attitudes of teachers toward ICT use has an important role in decreasing teachers' resistance toward using computers in their classes. Using technology in the field of second/foreign language education holds great potentials for learning language (Salaberry, 2001). In order to utilize computer and internet

technology in classes effectively, teachers' attitudes toward technology should be positive and they should be coached in using technologies in the field of education. Wong (2002) mentioned that merely having the knowledge and skills for using technologies is not enough for teachers, they should also have the right attitudes toward it. Teachers with negative attitudes toward technology usage in classes should know that it is better for them to adapt their teaching methods with alternative new ones (Ajzen, 1988).

Bullock (2004) mentioned that teachers' attitude toward technology can be one of the most important factors in accepting its use in education. Albirini (2006) conducted a study to observe high school EFL teachers' attitudes toward using technology in classes and found that these teachers showed positive attitudes toward utilizing technology in education settings. Similarly, in a study by Başöz and Çubukçu (2014) on 112 pre-service EFL teachers, pre-service teachers were found to indicate positive attitudes toward computer-assisted language learning. They believe in the flexibility of technology to language learning. Hence, promoting teachers' positive attitudes in using internet technology will promote accomplishment in teaching and learning process (Simonson, 1995).

Gender and Attitudes toward Using the Internet

Some researchers believe that there is a significant difference between gender and their attitudes toward using computer and internet technologies. Durndell and

Thomson (1997) stated that on average, females have higher negative attitudes toward computer and internet technology than males. As Cyberdialogue (1998) mentioned in his study, despite the fact that utilization of internet technology by females has grown in the last few years, males still use the internet technology more than females (cited in Schumacher & Morahan-Martin, 2001). This could be due to the fact that males have more positive attitudes toward utilization of technologies than females. According to Jackson, Ervin, Gardner, and Schmitt (2001), female teachers tend more to hold negative attitudes toward technology use than male teachers. They declared that this kind of behavior may be related to the ways they utilize the technology.

Computer Anxiety and Attitudes toward Using the Internet

There are some studies which had been conducted to show the existence of the relationship between computer anxiety and attitudes toward using the Internet. In a study by Jackson *et al.* (2001), computer anxiety is negatively correlated with individuals' use of internet. In another study, Barbiere and Weiss (2004) used online sample and found that students who have been using the Internet for many years exhibited lower computer anxiety scores than those who do not utilize much of the Internet.

Gardner, Reider, Ruth, and Ross (1993) stated that computer anxiety and attitudes are statistically detachable constructs which demonstrate reliability and validity. On the other hand, Rosen and Maguire (1990)

found a relationship between the level of computer anxiety and the attitudes toward using technology. They believe in the fact that increasing the level of computer anxiety leads to negative attitudes. In a study which was conducted on the East European sample, Durndell and Haag (2002) concluded that participants' attitudes toward the Internet were associated with their computer anxiety. In specific, the participants who had lower computer anxiety showed more positive attitudes toward using the Internet.

Akbaba and Kurubacak (1999) stated that teachers who use technologies have positive attitudes toward computer and internet technology, while teachers who have computer anxiety tend to reject them. In a study on Iranian EFL teachers, Rahimi and Yadollahi (2011) found that teachers who had lower level of computer anxiety showed higher level of ICT usage in their English language classes.

Taken altogether, the above studies have indicated a continuation of research on the computer anxiety and attitudes toward using internet technology in English language classrooms. The aim of this study is to investigate whether this trend is valid for Iranian postgraduate student teachers pursuing their studies in the context of Malaysia.

METHOD

In order to determine the level of computer anxiety and the overall attitudes of using the Internet in English language classes among Iranian postgraduate student teachers, a quantitative approach was used in this

study. It employed a survey model which included a questionnaire and a semi-structured interview. In addition, to evaluate the significant relationship between these postgraduate student teachers' level of computer anxiety and their attitudes toward using internet, a correlational technique was used.

Sample

This study was carried out at public universities of Malaysia. Since the Iranian postgraduate student teachers were studying at three different strata, TESL, English Literature, and Linguistics, the stratified random sampling was applied in selecting the participants. One hundred and sixty participants (64 males and 96 females) completed the questionnaire.

Instrumentation

In order to achieve the goals of this study, a three-part instrument was used in which the content validity of the modified instrument was evaluated by a panel of experts. After validating the modified instrument by the panel of experts, it was used in a pilot test for the purpose of item evaluation, validity, and measuring the reliability between the items of the instrument:

1. The first section of this instrument consisted of the general information of participants such as gender, age, qualification, field of study, working experience, the amount of hours using computer per week, and the amount of hours using the Internet per week.
2. The second section - Computer Anxiety Rating Scale (CARS) - was designed by Heinessen, Glass, and Knight (1987) to measure the level of computer anxiety in individuals. CARS consisted of 19 Likert-scale items. The researcher modified four items from the original version. For example, item 1 "I look forward to using a computer on my job" changed to "I look forward to using a computer in my classes". This modified rating scale was utilized to determine the level of computer anxiety of the participants of this study. The obtained reliability for the modified version of CARS was 0.90. Heinessen *et al.* (1987) used a five-point Likert scale (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, and 5 =strongly agree) for this instrument. In this questionnaire, ten items are worded in the positive statements and nine items are worded in the negative statements. Negative items were reversed before data analysis. The total scores of CARS ranged from a minimum score of 19, which indicated a low level of computer anxiety, to a maximum score of 95, which showed a high level of computer anxiety.
3. The last section was on the Internet Attitudes Scale (IAS). The original version of this scale is called Computer Attitude Scale (CAS), which was developed by Nickell and Pinto (1986). In order to determine the overall attitude of the participants toward the internet use in English language classes, the

researcher modified CAS to IAS. The achieved reliability for the modified IAS was 0.82. IAS included 20 items where all the items were modified (the word “computer” to the word “internet”). In addition, some of the items had to be modified to make them more relevant to the context of English language classes. For instance, item number 1 “The computer will never replace human life” was changed to “The Internet will never replace English language textbooks”. A five-point Likert scale (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, and 5 =strongly agree) was designed by Nickell and Pinto for this instrument. In this questionnaire, eight items are worded in the positive statements and twelve items are worded in the negative statements, which have been reversed before calculating the collected data. The total scores of IAS ranged from a minimum score of 20, which showed an extremely negative attitude toward the internet, to a maximum score of 100, which indicated an extremely positive attitude toward the Internet.

In addition, a semi-structured interview was carried out to strengthen the results of the study. Five postgraduate student teachers were selected randomly to take part in the interview. The questions of the interview are as follows:

1. Have you always been anxious/ comfortable about using computers? Please explain why do you feel so?
2. Do you think that computers and the Internet have often been a source of frustration for you?
3. Do you think using internet is helpful in English language classes? Why?
4. When you have a question about using the computer, do you usually ask a person who is a female or male? What is your reason?

Procedures

The questionnaires were distributed to the participants. Before answering the questionnaire, all the participants had been informed about the goal of this research, and all the instructions in answering the questionnaires were given clearly. Five to ten minutes were required to answer the questionnaires. The paper-and-pencil format was used for giving out the questionnaires to the participants. First, the respondents answered some background information about themselves, and they also had to mention their opinions about their level of computer anxiety and their attitudes toward using the Internet in their classes by circling the numbers based on a scale from one to five. The Statistical Package for the Social Sciences (SPSS) version 18 was used to analyze the obtained data. After gathering and analyzing data obtained from the questionnaires, the researcher chose five respondents randomly to do an interview with them. Each interview lasted for about 15 minutes. Data gathered from the interviewes were coded and classified in order to categorize the participants’ responses based on the goals of the study.

RESULTS

A descriptive analysis was utilized to answer the first two research questions. Using the descriptive analysis, the mean and standard deviation of the overall mean scores on the computer anxiety and internet attitude scales were computed. In order to answer the next three research questions of the study, inferential statistical analysis such as independent-sample t-test and Pearson correlation coefficient were conducted to show the existence of differences/relationships between variables.

Results Related to Demographic Information

Based on the demographic data, the percentage of the female participants (60%) was greater than male participants (40%). Among the respondents, 54.9% were between 20-30 years old, 35.1% were between 31-40 years old, and 10% were above 40 years old. The majority of the participants were pursuing their Doctoral degree (65%), while 35% were pursuing their Master degree. Out of 160 participants, 44% were studying TESL, 39.9% were studying English Literature, and the others (16.1%) were studying Linguistics. Most of them (49%) had 1-3 years of working experience, while 22.2% of them had 4-6 years of working experience, 14% had 7-9 years of working experience, and 14.8% had 10 and above 10 years of working experience. The largest number of the participants (35%) used the computer between 11-20 hours, while 23% of them

used 1-10 hours, 26.4% used 21-30 hours, and 15.6% used 31 hours and above.

Results Related to Research Question 1

Computer Anxiety Rating Scale (CARS) encompassed 19 items with five-level options which ranged from 1 as strongly disagree to 5 as strongly agree. Option 1 showed a very low level of computer anxiety and option 5 showed a very high level of computer anxiety. Before entering data into Statistical Package for Social Sciences (SPSS) version 18, nine negative items were reversed in order to have the same level of value with the other items of the scale.

The overall mean and standard deviation of the Computer Anxiety Rating Scale (CARS) were 51.84 and 11.38, respectively (Table 1). As shown in Table 2, which presents the level of computer anxiety in relation to the five options of the scale and the mean range for each level, both the mean and median scores showed that most of the scores in this scale were in the moderate category. Therefore, the participants indicated moderate computer anxiety in this study.

TABLE 1
Overall Mean, Standard Deviation, Range of the Scale

Scale	Mean	Std. Deviation	Range (Min/Max)
Computer Anxiety (CARS)	51.84	11.38	31/75
Median=52.00			

TABLE 2
The Mean Range for Each Level of Computer Anxiety Rating Scale

Scale	Mean Range	Level
1 Strongly disagree	19-34.1	Very low
2 Disagree	34.2-49.3	Low
3 Undecided	49.4-64.5	Moderate
4 Agree	64.6-79.7	High
5 Strongly agree	79.8-95	Very high

Results Related to Research Question 2

The Internet Attitude Scale (IAS) included 20 items with a five-point rating scale for each item. The level of the options of this Likert-scale was from 1 (strongly disagree) to 5 (strongly agree). Among these 20 statements, twelve items were negative toward the internet attitude. To make these 12 items positive so as to keep the same level of value with the other items of the scale, all of them were reversed.

Table 3 indicates that the overall mean score and standard deviation of the Internet Attitude Scale (IAS) were 64.84 and 8.42, respectively. As illustrated in Table 4, which displays the level of internet attitude in relation to the five options of the scale and the mean range for each level, the mean and median scores were in the moderate category.

TABLE 3
Mean, Standard Deviation, Range of the Scale

Scale	Mean	Std. Deviation	Range (Min/Max)
Internet Attitude (IAS)	64.84	8.42	44/81

Median=65.0

TABLE 4
The Mean Range for Each Level of the Internet Attitude Scale

Scale	Mean Range	Level
1 Strongly disagree	20-36	Very low (Very negative attitude)
2 Disagree	36.1-52.1	Low (Negative attitude)
3 Undecided	52.2-68.2	Moderate
4 Agree	68.3-84.3	High (Positive attitude)
5 Strongly agree	84.4-100	Very high (Very positive attitude)

Results Related to Research Question 3

In order to examine any significant differences between the male and female participants of the study and their computer anxiety, an independent-sample t-test at the 0.05 significance level was used. The following Table 5 shows the results of the t-test from the analysis of data.

TABLE 5
Independent-Sample T-Test Results for Differences in Computer Anxiety Level Based on Gender

Gender	N	Mean	SD	df	t	p
Male	64	44.92	8.38	158	-8.19	.000
Female	96	56.45	8.95			

As shown in Table 5, the level of significance obtained from the data analysis ($p=.000$) was less than $\alpha=0.05$. Thus, it could be concluded that there was a significant difference between Iranian male and female postgraduate student teachers and their level of computer anxiety ($t_{(158)}=-8.19, p<0.05$). The mean values of the male and female participants were 44.92

and 56.45, respectively. This meant that the male participants had less computer anxiety than the female participants.

Results Related to Research Question 4

The independent-sample t-test was conducted to measure the significant difference between male and female participants and their attitudes toward using the Internet in their classes. The results of the test are demonstrated in Table 6.

TABLE 6
Independent-Sample T-Test Results for the Differences in Attitudes toward Using the Internet Based on Gender

Gender	N	Mean	SD	df	T	p
Male	64	69.17	6.45	158	6.82	.000
Female	96	61.95	6.61			

Based on the results given in Table 6, it could be interpreted that there was a significant difference between Iranian male and female postgraduate student teachers and their attitudes toward using the Internet in English language classes ($t_{(158)}=6.82$, $p<0.05$). The scores for the average attitudes toward using the Internet for the male and female respondents were 69.17 and 61.95, respectively. It revealed that the male respondents had more positive attitudes toward using the Internet than female respondents.

Results Related to Research Question 5

Pearson Correlation Coefficient was conducted to determine whether there is a significant relationship between computer anxiety and attitudes of the participants

toward the use of the Internet in English language classes. Table 7 displays the test results from the analysis of the data.

TABLE 7
Pearson Correlation Coefficient- Computer Anxiety and Attitudes toward Using Internet

		Attitudes toward Using Internet
Computer Anxiety	Pearson Correlation	-.829**
	Sig. (2-tailed)	.000
	N	160

** Correlation is significant at 0.01 level (2-tailed)

Based on the findings given in Table 7, the results of the test presented a significant level of $p<0.01$ for the correlation between computer anxiety and the attitudes toward using the Internet. A significant strong negative relationship was found between computer anxiety and the attitudes toward using the Internet ($r=-.829$, $p<0.01$). This means that the increase of one variable is correlated with the decrease of another. Therefore, it can be concluded that the participants who had more computer anxiety displayed more negative attitudes toward using the Internet in their classes.

Results Related to the Interview

In order to strengthen the results of the study and to better understand the respondents' computer anxiety and their attitudes toward using the Internet, a semi-structured interview was conducted. Five interview participants (two males and three females), from those who had completed the questionnaire, were chosen randomly to take part in the interview. The four

questions of the interview were asked from the interviewees and each of them mentioned their opinions freely about their feelings toward computers and internet use. All the five interviewees showed moderate computer anxiety and they had both positive and negative attitudes toward the use of the Internet in English language classes. For example, in relation to using computers, one of the female interviewees stated that she felt somewhat apprehensive when utilizing computers after she came to an ESL context. She said that her unfamiliarity with computers might be one of the reasons of her computer anxiety. In addition, she believed that the internet could be both useful and useless in English language classes. She stated that although utilizing the Internet could improve students' learning of the English language learning in classes, it could also cause some problems such as paying less attention to the teacher in classrooms.

“In my opinion, it [internet] is a good and useful tool in order to be used in our English language classes because internet will improve our students' English language skills. Umm, for example, they can do lots of online activities. On the other hand, I think that it [internet] will never replace the English language textbooks. They [internet and English language textbooks] are completely different from each other (pause) by using too much internet in English classes, the interaction between teachers and students will

be reduced, because they [students] will pay more attention to use computers and internet rather than listening to their teachers. Umm, in my view most of the technologies have their own advantages and disadvantages and in this case [using internet in English language classes], it [internet] can be helpful and somehow useless.”

Besides, one of the male interviewees stated that he felt both anxious and comfortable when using the computer.

“.... For me, I'm not quite confident working with computers. As sometime I'm scared of making mistake like losing some of my data or the outcomes would not be the same outcomes of being expected. Frankly speaking, the level of confidence in me is more than level of anxiety. Although I'm scared of making mistakes, I use computers a lot during a day.”

Moreover, he agreed with the usefulness of the Internet in classes though he mentioned using the Internet created some problems for him.

DISCUSSION

The first purpose of this study was to determine the level of computer anxiety among Iranian postgraduate student teachers. Overall, the respondents had the mean value of (M=51.84) on the total computer anxiety

rating scale. The mean value obtained for the computer anxiety rating scale placed in the category of moderate computer anxiety. This result indicates that these student teachers are able to use computers, but sometimes they face computer anxiety when using them. Similarly in a study by Sam, Othman, and Nordin (2005), a moderate computer anxiety was also found among the respondents.

The second goal of this study was to determine the overall attitude of these participants toward using the Internet in their English language classes. Al-Zaidiyeen, Mei, and Fook (2010) stated that attitudes are important aspects in determining whether teachers will agree to utilize technologies as the teaching tools in their teaching process or not. The total mean value of the Internet Attitude Scale was computed in order to analyse the attitudes of the respondents toward using the Internet. The overall mean value of the Internet Attitude Scale for these participants was moderate ($M=64.84$). The moderate mean value of this scale showed that the respondents did not have negative nor positive attitude toward the use of internet in their English classes. Perhaps their moderate computer anxiety had an effect on their attitudes toward using the Internet.

The objective of the third research question was to determine the significant difference between Iranian male and female postgraduate student teachers and their computer anxiety. The findings of the independent-sample t-test revealed statistically significant differences between

the male and female participants of the study and their computer anxiety ($t_{(158)}=-8.19$, $p<0.05$). Despite the fact that these participants showed moderate computer anxiety, the males presented lower mean values ($M=44.92$, $SD=8.38$) than the females ($M=56.45$, $SD=8.95$), indicating that the level of computer anxiety among the male participants was less than the level of computer anxiety among the female respondents. The findings of this study were consistent with the findings of the previous ones. For example, in a study by Czaja, Charness, Fisk, Hertzog, Nair, and Rogers (2006), women were found to display more computer anxiety than men. In addition, a lot of studies mentioned that female preservice teachers showed more computer anxiety than male preservice teachers (Whitley, 1997; Colley & Comber, 2003; Todman & Day, 2006).

The fourth research question was aimed to investigate the significant differences between Iranian male and female postgraduate student teachers and their attitudes toward using the Internet in their English language classes. Independent-sample t-test was utilized to measure the differences between these two variables. Based on the findings of the study, a significant difference was attained between the male and female respondents and their attitudes toward the use of the Internet ($t_{(158)}=6.82$, $p<0.05$). The overall attitude toward using the Internet was moderate among the participants, but the males had higher mean value ($M=69.17$, $SD=6.45$) than the females ($M=61.95$, $SD=6.61$).

This means that the male respondents displayed more positive attitudes toward utilizing the Internet in their classes than the female respondents. The results of the present study supported the findings of some previous research. For example, in a study conducted on 191 teachers in Turkey, a significant difference was found between the male and female teachers and their attitudes towards internet use (Birisci, Metin, & Karakas, 2009). These researchers mentioned that male teachers revealed more positive attitudes toward using the Internet than female teachers.

A significant negative relationship was found between computer anxiety and attitudes toward utilizing the Internet ($r = -.829$, $p < 0.01$). This finding indicated that respondents with more computer anxiety had more negative attitudes toward using the Internet and the respondents with less computer anxiety had less negative attitudes (more positive attitudes) toward utilizing internet technology. The finding of this research question is consistent with the results of some previous research. In their study, Durndell and Haag (2002) illustrated that there is a significant correlation between computer anxiety and attitudes toward the use of the Internet. In their research, less computer anxiety by the participants led to more positive attitudes toward using the Internet. In a study by Rosen and Maguire (1990), a relationship was found between computer anxiety and attitudes toward using technology. They stated that increasing the level of computer anxiety led to negative attitudes among the respondents

of their study. In the same vein, Rahimi and Yadollahi (2011) found an inverse correlation between computer anxiety and technology usage of EFL teachers.

In addition, a semi-structured interview was conducted for further justification of the findings of the study. All the five participants revealed they were somewhat anxious about using the computer. For example, one of the female interviewees stated that she was afraid of pushing a wrong key when using a computer which might destroy her information on the computer. Besides, these interviewees showed both positive and negative attitudes toward the use of the Internet in English language classes. They saw some benefits in utilizing internet technology in English language classes for their students, but they were also worried about some consequences of internet use in educational environments. For instance, one of the interviewees mentioned that using the internet is helpful in language classes, but overusing it might be harmful to students. Another one reported that by utilizing the Internet in classes, students' attention to teachers might be decreased. Generally, the female participants indicated being more anxious when using the computer and showed more negative attitudes toward internet use when talking to the researcher during the interview. It can be concluded from the interview that the responses justified the findings of the research questionnaire and supported those results.

CONCLUSION

Using computers and the Internet in educational environments has shifted the way teachers use instruction in their classes. Computer anxiety is one of the problems that many teachers face when using computers. Some reasons such as unfamiliarity with computer skills or being afraid about its ineffectiveness in their teaching and learning process may lead teachers to reject using the computers in their classes. Many studies have demonstrated that female teachers faced more computer anxiety than male teachers. For instance, Colley and Comber (2003) revealed that female teachers indicated higher computer anxiety than male teachers.

The way the teachers view the computer and internet technology will influence the implementation of these tools in classes. Since utilizing computer and internet technology in learning environments can help students to learn a second/foreign language more effectively, teachers' positive attitudes toward the Internet will encourage them to use it more frequently in their language classes.

The findings of the study demonstrated that the participants had moderate computer anxiety and their attitudes toward internet use were also moderate. It meant that they were ambivalent about the usefulness and effectiveness of the Internet in English language classes. Significant gender differences were found in their computer anxiety and attitudes toward internet. Male respondents reported less computer anxiety and more positive attitudes toward the use

of the Internet than female respondents. Moreover, a significant negative relationship was found between computer anxiety and the attitudes of these participants toward using the Internet.

It should be mentioned that the results from this study may not be generalizable to a great population of Iranian postgraduate student teachers because the sample of this study were following their studies in the context of Malaysia, which is different from the student teachers who are studying in the context of Iran.

As technology is improving rapidly in the field of education, especially in English language learning, teachers should be equipped with sufficient technology skills and it is also essential to persuade English language teachers of the efficiency of the technology in advancing the teaching and learning process.

RECOMMENDATIONS

In order to eliminate the computer anxiety of teachers, especially female teachers, policy makers should equip teachers psychologically and technically with sufficient computer skills so as to help them overcome their apprehension when using computers. The Ministry of Education should provide technology-related workshops and seminars for teachers to make them more familiar with computers and internet technology.

Since the student teachers in the current study indicated moderate attitudes toward using the Internet, i.e. they had neither positive nor negative attitude,

the government, policy planners and administrators should provide relevant training programmes for English language teachers in order to encourage them to utilize computers and internet technology in their classroom curriculum. As female teachers revealed more negative attitudes toward using the Internet than male teachers, the training programmes should apply more for female teachers than their male counterparts.

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Musical Mnemonics to Facilitate Learning of Matriculation Biology: Light-dependent Reactions of Photosynthesis

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ABSTRACT

Learning Biology involves mastering declarative knowledge and mastering procedural knowledge. The 'Light-dependent Reactions of Photosynthesis' is a topic requiring procedural knowledge. Students have to remember the facts of the light-dependent reactions. They must also remember the order in which the steps of the reaction occur. Students of Malaysian Matriculation Colleges learn Biology in English, which is not their first language. As such, students have difficulty in remembering the light-dependent reactions of Photosynthesis. The purpose of this project is to help these students remember the facts correctly, and in the right order. The results of an independent samples t-test showed that this approach enabled students to consolidate their memory processes; $t(146) = 21.08$, $p = 0.0005$. The effect size was 0.8661. Based on the findings, the researcher proposed that musical mnemonics be used to facilitate remembering of other biological processes. As a learning tool, musical mnemonics must meet several criteria in order to be effective and the researcher has suggested the criteria. The results of this study imply that procedural knowledge in Biology can be successfully taught in English when teachers are innovative.

Keywords: Light-dependent Reactions, modelling, musical mnemonics, Photosynthesis, procedural knowledge

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INTRODUCTION

Three related aspects of learning, constructivism, learning of procedural knowledge, and how people learn as explained in the Social Learning Theory (Bandura, 1977) are taken into consideration in this study.

Our existing knowledge is stored in our brain and encoded as 'constructs'. New learning is not understood unless it is connected to our existing concepts, knowledge and experience. Hence, new knowledge is linked to our existing knowledge and this process is constructivism. The links are stronger if they involve recent vivid engrossing, multisensory experience (Petty, 2009). In this study, musical mnemonics is the learning tool to engage learners with a song and to enhance memory potential (Cirigliano, 2013).

The second aspect is that learning facts or declarative knowledge is different from learning how to do something or procedural knowledge (Michael, 2006). The 'Light-dependent Reactions of Photosynthesis' is a topic that requires both declarative and procedural knowledge. Students have to remember the facts. They also have to remember the order in which the processes are taking place, and the sequence must be correct. This creates a greater challenge to master biological processes, like the Light-dependent Reactions of Photosynthesis.

The third aspect concerning learning, from the Social Learning Theory (Bandura, 1977), is that people learn through observing and imitating the behaviour and attitudes of significant others. Children watch and imitate parents, while students watch and imitate the behaviour of teachers, and this will enable students to achieve their learning objective (Yeoh, 2013c). Bandura (1977) calls this observational learning or modelling. The students observed and followed the researcher drawing a detailed

diagram of the Light-dependent Reactions of Photosynthesis, from the information contained in the music mnemonics. This observational learning process required about 30 minutes.

Background and Purpose

Students of Matriculation Colleges in Malaysia learn Biology in English. All Sciences and Mathematics are taught and tested in English. Matriculation colleges continue to teach Sciences and Mathematics in English to prepare students for universities. However, English is not the first language of the majority of the students. Students have told the researcher that they are able to understand the processes or steps of Light-dependent Reactions of Photosynthesis. The researcher observed that the students were able to answer the structured and essay questions in the Biology tutorial book. They had prepared answers to the questions before the tutorial class, referring to their text books. Nonetheless, they said that they were not sure about how well they could remember when there were many more new chapters to be learned within the semester. Photosynthesis is the seventh chapter, of 12 chapters. They also mentioned that the names of organic substances (like 3-Phosphoglycerate, Glyceraldehyde 3-phosphate, Ribulose 5-phosphate, Ribulose bisphosphate, Plastoquinone, Plastocyanin) were long names, unfamiliar and difficult for them to remember. They have difficulty in retrieving the facts correctly and in the right order, in English, due to the fact that English is

not their mother tongue. Several of the researcher's students have even admitted that they have to learn in Malay and then translate the facts into English (Yeoh, 2013c).

English was used as the medium for Teaching and Learning of Science and Mathematics (PPSMI, the Malay acronym) from 2003 in schools and Matriculation colleges. In 2012, however, schools were allowed to use Malay Language, and many schools preferred to revert back to the use of the national language, Malay Language. By this means, school students would avoid having to learn in Malay and translate back to English, as done by the students involved in this study.

Research has shown that primary school students who are first taught Science in the native language (Malay, in this case) can achieve greater general knowledge of the subject (Science), if they are first taught the subject in the mother tongue (Engle, 1975). This is the advantage of teaching Primary Science in the mother tongue (Malay, in Malaysia). Other studies that showed parallel results on the advantage of the mother tongue in education of children were documented by Cummins (1979) and Butler and Marsh (1986). Yuen and Siu (2014), however, showed that although students became more proficient in English language (the second language) that was used as a medium for instruction of content subjects like Science, their performance in the content subjects suffered.

However, PPSMI is currently still in effect for 18 year old matriculation or

pre-university students (the researcher was given this information at a meeting on 26-28 February 2014, organized by the Matriculation Division of the Education Ministry, for all the Heads of PPSMI in their respective colleges). Students who have been studying Science in schools in the national language admitted that they need help when the medium of instruction is changed to English. Hence, the purpose of this project is to enable these students to remember the facts of the Light-dependent Reactions of Photosynthesis correctly and in the right order, in English.

Although the studies reviewed, in the next section, show that mnemonics is very significant in improving the recalling of facts and improving test scores, research that has been carried out and documented by Malaysian researchers in this area is still limited. The researcher carried out a study on the effectiveness of musical mnemonics to facilitate students' learning of the Krebs Cycle of Respiration (Yeoh, 2012). Then, she went on to investigate students' recall of the Calvin Cycle of Photosynthesis (Yeoh, 2013a), Glycolysis (Yeoh, 2013b), and the Electron Transport Chain of Respiration (Yeoh, 2013c). The purpose of this project is to enable Matriculation students to recall the facts of Light-dependent Reactions of Photosynthesis correctly, and in the right order, in English.

LITERATURE REVIEW

This section discusses studies on learning and mnemonics. Bandura's Social Learning Theory (1977) has three core concepts.

The first core concept is that people learn by observation or modelling. The second core concept is that internal personal mental states are important to learning. Thus personal satisfaction or a sense of accomplishment positively influences learning and behaviour, and it is not just the external environment that plays a role in learning. This emphasis on internal mental states relates Bandura's theory to cognitive theories. Bandura's third core concept is that learning does not necessarily produce a permanent change in behaviour.

Bandura (1977) stated that human behaviour is mainly learned by observational learning or modelling. By observing parents and teachers, children get an idea of how new behaviours are performed. This coded information serves as a guide for subsequent action. In this research, the teacher was the live model, showing the behaviours of how the musical mnemonics (or song lyrics) could be used to draw a diagram of the Light-dependent Reactions of Photosynthesis (Figure 1).

The researcher realised that the intrinsic mental states of the students are important for learning to occur, as stated in Bandura's (1977) second core concept. Students need to actively assimilate the information in the mnemonics, or song, of the Light-dependent Reactions of Photosynthesis. Active learning is taking place when constructivism links are forged between new and existing knowledge by the students. Singing the mnemonics or song at a slow pace while drawing the diagram of the Light-dependent Reactions of Photosynthesis (Figure 1) would engage

the eyes and ears, the sensory organs of learning. The researcher desired strong constructivism links to be forged in the minds of the students, through vivid, engrossing, multisensory experience (Petty, 2009).

Mnemonics may be defined as devices to enable students to remember information on various subjects, more easily and effectively, by connecting the new unfamiliar information that must be learned with information that is already known by the learner, with the use of visual and auditory cues (Mastropieri, Sweda, & Scruggs, 2000). Mnemonic strategies, including acrostics and acronyms, have facilitated young adult learners to recall information by making new information more familiar, meaningful and concrete. The young adult learners used acrostics and acronyms to improve their vocabulary knowledge (Bakken & Simpson, 2011).

Among English-speaking preschoolers (N = 36, 2 years), Shmidman and Ehri (2010) found that mnemonics facilitated the learning of foreign alphabets. They suggested that mnemonics was effective to reduce confusion, accelerate learning, besides enhancing long-term retention of foreign alphabets by the preschoolers (Shmidman & Ehri, 2010).

Mnemonics devices accelerated the acquisition of new knowledge in Elementary Accounting and helped to enhance formal reasoning (Laing, 2010). Just like Bakken and Simpson (2011), Laing (2010) also stressed that mnemonics devices such as acronyms and acrostics, narratives and

rhymes helped to make abstract concepts more meaningful and concrete.

An acronym that science students use to recall the colours of the rainbow is ROY G BIV. This helps them to recall the order of the rainbow colours correctly as Red, Orange, Yellow, Green, Blue, Indigo and Violet (Bakken & Simpson, 2011). This same acronym was used by the author while teaching the visible light spectrum in Photosynthesis.

An acrostic is a form of writing in which the first letter or syllable spells out a word or a message. Acrostics is catchy to enable students remember something important. This was used by the researcher for students to remember the sequence of organic compounds of the Krebs cycle (Yeoh, 2012). The sentence was: 'Citrus, Isobel, Ketty, sing sulk fume (on) male oxen.' Using this sentence, students can easily remember the sequence from Citrate, Isocitrate, Ketoglutarate, Succinyl CoA, Succinate, Fumarate and Malate. Students can also recall easily the number of Carbon atoms in each of these compounds because this is provided by the number of letters in the names [Citrus, Isobel, Ketty, sing sulk fume (on) male oxen]. By this, they remember that Isocitrate has 6 Carbon atoms in its molecule, and Ketoglutarate has 5 Carbon atoms in its molecule. This also reminds the students that a decarboxylation reaction has occurred, that needs a Decarboxylase enzyme. Similarly, from Ketoglutarate to Succinyl CoA, another decarboxylation reaction has taken place that needs another Decarboxylase enzyme. This clue is

provided by putting a 5 letter word 'Ketty' for Ketoglutarate, and a 4 letter word 'Sing' for Succinyl CoA. 'Sulk' is another 4 letter word used for succinate. 'Fume' sounds like fumarate, another 4-Carbon compound; and 'male' sounds like malate, also a 4-Carbon compound (Yeoh, 2012).

The sentence: 'Citrus, Isobel, Ketty, sing sulk fume (on) male oxen' was set to the tune of 'Old MacDonald had a farm' that most students are already familiar with, making it a musical mnemonic as well (Yeoh, 2012). The use of musical mnemonics by the researcher to teach Biology (Yeoh, 2012; Yeoh, 2013c) is parallel to the study reviewed on the effectiveness of musical mnemonics as a powerful learning tool in medicine and health science (Cirigliano, 2013).

Biology is basic science for Medical Studies that comprises Anatomy, Biochemistry pathways, Surgery, Pharmacology, Clinical procedure, Diagnostics, Medication and Treatment. As such, Medicine is a broad, diverse field and medical students need devices for memorisation and recall (Cirigliano, 2013). Hence, Medicine has a history of mnemonics composed by students and instructors. Medical students need the memory aids, and many mnemonics, including musical mnemonics have been placed on online databases such as <http://www.medicalmnemonics.com>. Anatomy mnemonics and Pharmacology mnemonics are available at www.doctorshangout.com. (The webpages were assessed on 8 March 2014). Just like medical students, Biology

students also need mnemonics as memory aids (Yeoh, 2012; Yeoh, 2013c).

Since song (and music) has been a form of communication, is present in every culture, and has from ancient times been the medium to pass down significant stories from one generation to the next (Dunlap & Lowenthal, 2010), it is not surprising that it is useful to employ musical mnemonics as a learning tool. In this study, song that has the ability to engage students' attention and to enhance their memory potential is used as a learning tool for students to remember the Light-dependent Reactions of Photosynthesis in Biology, just as it was used for the study of Health Science (Cirigliano, 2013). Cirigliano (2013) stated that instructors or teachers played a major role in using musical mnemonics, from a survey of ten music mnemonics on YouTube. In this study, it is the teacher who created the music mnemonics for the Light-dependent Reactions of Photosynthesis. Cirigliano (2013) suggested that more robust research like meta-analysis could confirm the value of mnemonics in the learning of Health Science and Medicine.

It is necessary to emphasise the limitations of mnemonic strategies. Mnemonics is useful only for stimulating recall, but it is not a comprehension strategy (Bakken & Simpson, 2011); mnemonics does not help students to understand. The students involved in this study have been given a lecture on Light-dependent Reactions of Photosynthesis, and they have also had practice in answering structured and essay questions on Photosynthesis.

They admitted that they had understood the Light-dependent Reactions, but they said that they could not remember. With the musical mnemonics that they were taught for the Light-dependent Reactions, the students admitted that they enjoyed the learning. This shows that the song for the Light-dependent Reactions that has engaged them has enhanced their recall potential, and is an effective learning tool in this academic setting (Cirigliano, 2013; Yeoh, 2012; Yeoh, 2013a; Yeoh, 2013b; Yeoh, 2013c).

Letter-phonetic mnemonic devices (acronyms and acrostics) have also been used to facilitate nurses to recall basic knowledge in nursing education (Onur, Ali, Yunus & Musa, 2013). The research investigated the effect of the letter/phonetic method on nurses' attainment of basic knowledge of the healthcare system, and nurses' recall of this basic knowledge (N=76).

In that study, only the experimental group (n=39) was taught using letter-phonetic mnemonics. Both the experimental (n=39) and the control groups (n=37) were tested on healthcare system, health teams and the role of nurses. They were given the same test (i.e., the Attainment test) after the study. Using a t-test, the researchers showed that there was a significant difference between the experimental and control groups ($t = 9.35$, $p = 0.0005$), in favour of the experimental group that employed letter-phonetic mnemonics (Onur *et al.*, 2013).

Three weeks after the instruction, the participants were tested again; and the same Attainment test was given as a Retention

test (Onur *et al.*, 2013). Using a t-test, the researchers, once again, found a significant difference between the experimental and control groups, in favour of the experimental group that employed letter-phonetic mnemonics ($t = 12.73$, $p = 0.0005$).

Acronym mnemonics was also used by Schumacher (2005) in nursing practice. Before hanging or pushing medication, nurses, pharmacists, physicians, healthcare providers, and even patients themselves should ask: Do your CATS PRRR?; where the acronym (CATS PRRR) represents Compatibilities, Allergies, Tubing, Site, Pump, Right Rate, Release, and Return and Reassess. This acronym is to facilitate nurses to remember the many facets of safe techniques for intra venous medication preparation, administration, and the correct use of the various intra venous pumps. Again, it is emphasised that the common feature of the mnemonics used by Biology students, medical students and nurses is that they are devices for recalling, and not for comprehension. Mnemonics should not replace regular lectures and tutorial classes that place importance on students' learning and understanding and constructivism, but mnemonics could facilitate Biology students, medical students and nursing students to recall information (Cirigliano, 2013; Onur *et al.*, 2013; Yeoh, 2012; Yeoh, 2013a; Yeoh, 2013b; Yeoh, 2013c).

Research on physically impaired persons has also shown that musical mnemonics facilitated superior learning and memory retention in patients with multiple sclerosis. These patients were able

to recall and sing back the words. Thaut, Peterson and McIntosh (2005) suggested that musical learning accesses compensatory pathways for memory functions. Music learning could have conferred a neuro-physiological advantage through the stronger synchronisation of neuron assemblies underlying verbal learning and memory. The authors concluded that melodic-rhythmic templates in music could drive internal rhythm formation in recurrent cortical networks that are involved in learning and memory (Thaut *et al.*, 2005; Yeoh, 2013c).

Simmons-Stern, Budson and Ally (2010) found that musical mnemonics enhanced attention and improved memory in patients of Alzheimer Disease (AD). Music processing function is generally spared by the neuron degeneration of AD patients. These AD patients showed better recognition accuracy for the lyrics that were sung as compared to spoken lyrics of unfamiliar children's songs. The authors proposed that the brain areas serving music processing are not affected by AD, allowing a more holistic encoding that facilitated recognition, and that music heightens arousal of AD patients producing better attention and improved memory (Simmons-Stern *et al.*, 2010; Yeoh, 2013c).

The first effort of the researcher to investigate the effectiveness of musical mnemonics to facilitate the learning of Matriculation Biology was on students' retrieval of facts of the Krebs cycle of respiration (Yeoh, 2012). On this occasion, the researcher used a pre-test post-test procedure. A pre-test was administered.

Then, the researcher proceeded to teach them the music mnemonics (discussed earlier in his review) and showed them on the Interactive Electronic Equipment (IEE) scanner how to employ the mnemonics as an aid to recall the facts and processes of the Krebs cycle. After that, a post-test was carried out. The data collected at this meeting was analyzed using the paired sample t-test.

The researcher found that musical mnemonics did help Biology students to improve their scores. The pre-test mean score for the sample of 145 students was 4.12 (SD = 4.75) of a total of 20. The mean score at the post-test increased to 13.81 (SD = 3.16). The paired samples t-test used in that research showed a significant improvement in the post-test scores, $t(144) = 23.45$, $p = .0005$. She concluded that musical mnemonics was effective in helping students remember the Krebs cycle and implied that the teaching of Biology in English is facilitated when teachers are innovative (Yeoh, 2012). However, after the first study, the design of subsequent studies, including this present study, is improved by including a control group (Yeoh, 2013a; Yeoh, 2013b; Yeoh, 2013c).

METHODOLOGY

Details of Innovation

To enable students to remember the Light-dependent Reactions of Photosynthesis, the researcher used the song below. It was a variation of 'The Sound of Music'; and sixteen short lines were sufficient to describe the Light-dependent Reactions.

'PSII absorbs light, electrons get excited,
Electrons rise up to primary acceptor of PSII;
Electrons pass through ETC of Pq, cytochromes and Pc,
ATPs produced.

PSI absorbs light, electrons get excited,
Electrons rise up to primary acceptor of PS I;
Electrons pass through ETC of Fd, cytochromes and Pc,
ATPs produced.

When PS I works on its own, only ATPs are produced,
This is cyclic photophosphorylation
When PS I works with PS II, electrons may pass through
Another pathway, through ferredoxin to reduce NADP^+

In this non-cyclic process, NADPH are produced,
Catalyzed by NADP^+ reductase enzyme;
With hydrogen released from photolysis of water,
The electrons go to PS II.'

Since the constructivism links are also strengthened when they are used repeatedly by the learners to describe and explain (Petty, 2009), the researcher encouraged students to sing the mnemonics and teach their friends.

Besides musical mnemonics, the researcher had silently used ‘modelling’ (Bandura, 1977). Students observed and imitated the behaviours that enabled the researcher to draw a detailed diagram of the Light-dependent Reactions of Photosynthesis just from the information contained in the mnemonics (Fig.1). After all, learning is essentially a social activity and we learn by direct verbal instruction and by observing teachers and peers (Bandura, 1977; Yeoh, 2013c).

Implementing the Research

The researcher met 148 students from eight tutorial classes at a late evening class on Monday, 18 February 2013; it was the 11th week of the semester. All the students had had lessons on Photosynthesis in week 9, and had done tutorial exercises during week 10 of the semester.

The students were randomly assigned to the control and experimental groups so that the control group and the experimental group would have equal number of students. Each

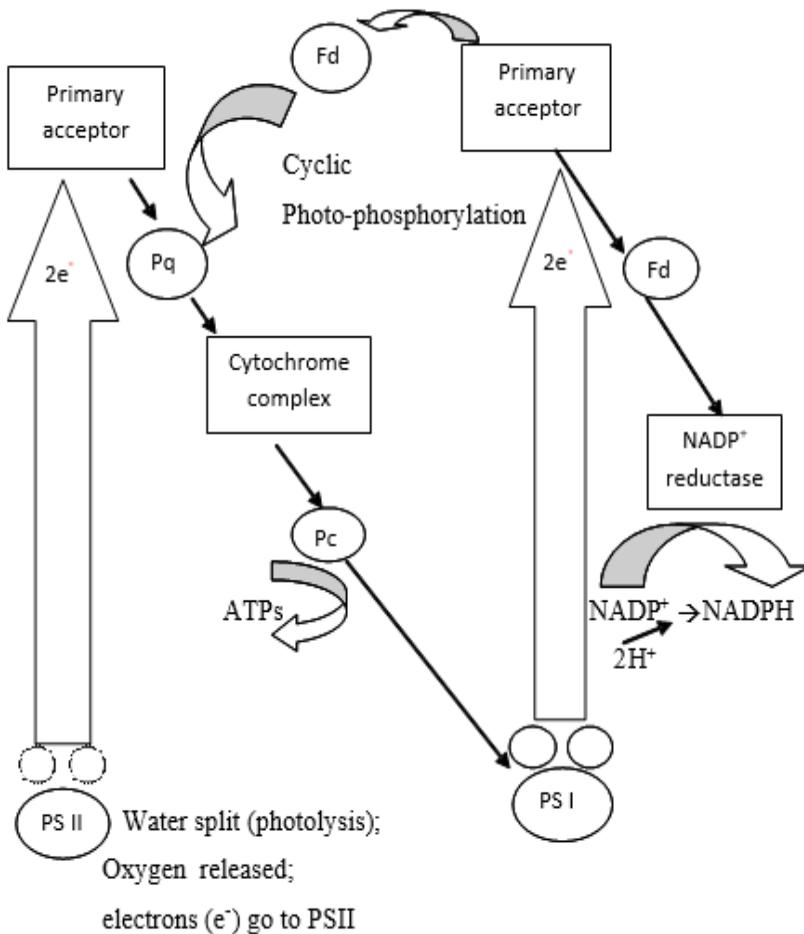


Fig.1: The light-dependent reactions of Photosynthesis, drawn from the musical mnemonics

student picked up a folded piece of paper. A 'C' would mean that he/she would be in the control group, while an 'E' would assign the student to the experimental group (Yeoh, 2013c). The control group was asked to go to the next empty room and learn the Light-dependent Reactions of Photosynthesis, in a conventional manner from the book and notes, while the experimental group was taught the musical mnemonics (simply called a 'bio-song') for Light-dependent Reactions of Photosynthesis.

The researcher also showed them (the experimental group) how to employ the song as an aid to draw and label a diagram of the Light-dependent Reactions of Photosynthesis. The group had the opportunity to observe and follow the researcher in drawing a detailed diagram from the information in the mnemonics (Fig.1).

When the control group came back in about half an hour, a short test was administered to all the students. There was no communication between the experimental and control groups that the researcher observed. The experimental group sat on the right side of the aisle of the lecture theatre, while the control group sat on the left of the aisle. For the test, the students were required to answer 15 short questions (see Evaluation) and to label five structures on the blank diagram of the Light-dependent Reactions of Photosynthesis (Figure 2). This would show whether they could apply the information in the songs to answer the questions. If the students only memorised, they would probably be writing the song.

After all the test papers had been collected, the researcher taught the control group the musical mnemonics and showed them how to use it to draw and label a diagram of the Light-dependent Reactions of Photosynthesis on the scanner. It was the right way to make up for their being in the control group. Some students of the experimental group sat quietly and listened attentively; and some sang together with the control group. In about fifteen minutes, when the control group were able to manage the song, all the students were asked to sing together, and they sang happily. The data were analysed for both groups. All the statistical analyses were carried out using SPSS. Finally, to facilitate further research, a video CD of the mnemonics was created using Windows Movie Maker (Yeoh, 2013c).

Evaluation

All the questions were to be answered. The questions were set to emphasise the importance of the sequence of the reactions of the Light-dependent Reactions of Photosynthesis.

Section A: Answer all the questions:

- Q1. What happens to electrons when PSII absorbs light?
- Q2. Where do these electrons go?
- Q3. What are the components of this ETC of photosynthesis?
- Q4. What happens to electrons when PSI absorbs light?

Q5. Where do these electrons go?

Q12. What is produced in the same reaction?

Q6. What are the components of this ETC?

Q13. What is the enzyme involved in this reaction?

Q7. What is produced when PSI works on its own?

Q14. What is the source of hydrogen ions?

Q8. What is the name for this reaction in Q7?

Q15. Where do the electrons go to?

Q9. What happens when both photosystems work together?

Section B: Name the following substances or processes labeled A to E on the diagram of the Light-dependent Reactions of Photosynthesis (Fig.2).

Q10. What is reduced in the reaction in Q9?

Q11. What is the name for this reaction?

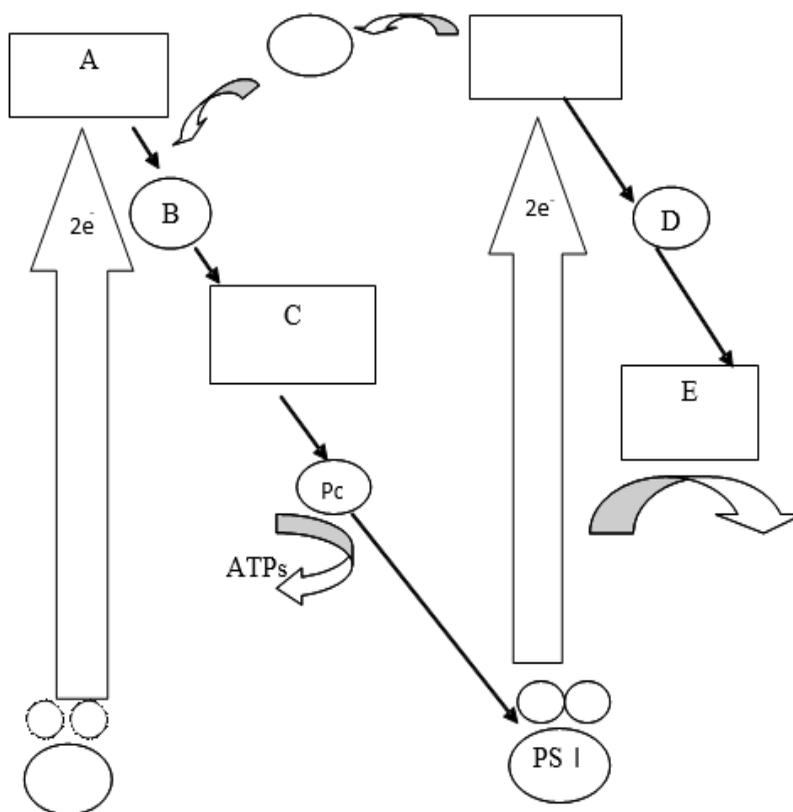


Fig.2: Evaluation on the light-dependent reactions of Photosynthesis

RESULTS AND DISCUSSION

The results showed that the mean score for the control group of 74 students was 2.89 (minimum = 0, maximum = 13 of a total of 20, while the standard deviation (SD) was 3.74; whereas the mean score for the experimental group sample of 74 students was 15.34 (minimum = 7, maximum = 20 of a total of 20, SD = .44). Generally, the students of the control group seemed to get the answers to the first two questions of Section A, and correctly label the Primary acceptor in Section B. However, the experimental group was more consistent, better able to answer Section A correctly and label the organic substances in Section B of the Evaluation.

Using SPSS, Levene's test showed that equal variances could be assumed, $F=.130$, $p=.719$. Independent Samples t-test showed a significant difference between the two groups $t(146) = 21.077$, $p = .0005$. The effect size was 0.8661 (Becker, 2013). The results showed the research has a large effect (Cohen, 1992), and that musical mnemonics is effective to enable students to the processes of the Light-dependent Reactions of Photosynthesis by consolidating their memory processes. In a previous research on mnemonics for teaching the Electron Transport Chain, a smaller effect size of 0.4965 was obtained (Yeoh, 2013c).

The results are in line with the literature reviewed on mnemonics. Bakken and Simpson (2011) has stated that mnemonics enabled students to remember information by making the information more familiar,

more meaningful and concrete; that mnemonics was applicable to an array of subject areas; and useful with young adult learners that this research focused upon.

The results of this study are similar to the research by Onur *et al.* (2013), who reported that letter-phonetic mnemonics, including acronyms, were highly effective in boosting nurses' recall in Basic Knowledge acquisition. They reported the t-values of the Attainment test and the Retention test that were carried out after three weeks. In both the tests, learning with mnemonics facilitated recall. However, the present study did not include a Retention test; and it would be a new idea that the researcher is curious to implement with future cohorts of Matriculation students.

With the use of musical mnemonics for learning Biology, this researcher is sharing the idea of other educators and instructors of Health Science and Medicine (Cirigliano, 2013). The researcher has encouraged her students to create their own mnemonics, and some of her students have taken up the challenge to create music mnemonics for learning the *Lac Operon* reactions (Yeoh, 2013d).

Even though the respondents in this study are physically normal (Cirigliano, 2013), not impaired by AD as in Simmons-Stern *et al.* (2010) nor impaired due to multiple sclerosis (Thaut *et al.*, 2005), they have a handicap, in that English is not their mother tongue. However, mnemonics facilitated their recall of the Light-dependent Reactions of Photosynthesis. The results of this study are parallel with previous research,

including that carried out by the same researcher on the effectiveness of music mnemonics in teaching the Krebs cycle (Yeoh, 2012). The results are also in line with the studies concerning students' ability to remember other biological pathways, namely, the Calvin Cycle (Yeoh, 2013a), Glycolysis (Yeoh, 2013b) and Electron Transport Chain (Yeoh, 2013c).

CONCLUSION

The result of this study is parallel to other studies on mnemonics that have been reviewed. Musical mnemonics had facilitated students to recall the facts of the Light-dependent Reactions of Photosynthesis correctly and in the right order, in English. The findings are in line with previous studies that have been reviewed, employing mnemonics to facilitate memory recall.

Based on the findings, the researcher proposed that musical mnemonics be used to facilitate learning and recall of other biological processes. Students should be encouraged to be more independent and to compose their own mnemonics. As teachers, we are doing innovative teaching towards the aim of creating independent and innovative learners (Yeoh, 2013d).

Furthermore, since we are using musical mnemonics as a memory tool, it implies that several criteria should be met in order that the mnemonics will be effective. It is necessary that the lyrics be correct and concise or as brief as possible because that will help students to learn and recall more easily. Students should be able to draw

a flow chart or diagram of the biological process from the lyrics of the mnemonics. From the diagram, they will be able to explain the biological process in simple English without omitting the important facts. As for the melody, the researcher suggests that it should be simple and familiar or at least easy to learn. The rhythm of the song should allow the key words to be uttered clearly. The researcher had expressed to her students the hope that they would bear these criteria in mind whenever they needed to create their own musical mnemonics to facilitate memory recall in the future. It may be that their self-created mnemonics be the most effective to facilitate their own learning and recall.

The results of this study imply that Biology can be successfully taught in English when teachers are innovative. This is important to the researcher, in view of the fact that future cohorts of Matriculation students from 2014/2015 will be those who were not required to learn school science and mathematics in English. The exposure of these students to English is not likely to be better than the batch of students involved in this study. Thus, the researcher expects a greater challenge, and will need to facilitate students' recall of Biological processes, using musical mnemonics.

Despite this, the study has shown that Biology, a 'wordy' subject, can be taught in an environment where the mother tongue is not English. This study also implies that the learning of Biology is facilitated by musical mnemonics. Mnemonics is a useful tool that can be employed by Biology teachers

who carry out the teaching of science and mathematics in English to prepare students for university education where the lingua franca is English.

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The Impacts of Emotional Intelligence on Work Life Balance: An Empirical Study among Faculty Members' Performance in Educational Institutions at Tamil Nadu, India

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ABSTRACT

The entire working environment is growing with a high pressure especially after the globalisation and with the development of new technologies, differentiated services, revolution of innovation, creativity explosion and varied choices. The educational sector is not an exception to this scenario. Each educational institution, with the great expectations of the students and their parents, competes with one another for excellent efficiency, prodigious performance and unbeatable uniqueness. In creating uniqueness among competitors, the demand of the management from the faculty members' performance is too high in the educational sector. The educational sectors' competitiveness poses a great challenge for emotional intelligence and work life balance among the employees. The employees' expectations and the reality contradict on each other that and have effects on performance. Based on this, the study focused on the impacts of Emotional Intelligence and its subscales, namely, self-awareness, self-management and relationship control on work life balance of Employees performance in the educational institutions in Tamil Nadu. Based upon this, an empirical study was done to find the impacts of emotional intelligence on work life balance for better performance of Faculty members in the educational institutions, Tamil Nadu, India. This study found that most of the faculty members' performance is affected by conflict/misunderstanding with the superiors, while a few of them have major conflicts/misunderstanding with the family members. This study is limited to the faculty members in the educational institutions in India; and it can be extended to other

professional groups in India and abroad to get a significant insight in understanding the contribution of EI on WLB that leads to effects better performance. Persons involved in educational policy making and professional preparation consider the importance of the influence EI on WLB

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and provide them with excellent pay, performance based incentives, promotions, flexible working hours and other welfare measures towards improving faculty's performance in the educational institution.

Keywords: Emotional Intelligence, Work Life Balance and Faculty Performance

INTRODUCTION

Effective living is determined by intelligence that is coupled with emotions of every human being. Scientific research reveals that Emotional Quotient (EQ) is more important than Intelligence Quotient (IQ) (Charles Darwin, 1872). IQ may take one to the top position but it is EQ that makes one a top person. EI is one of the important behavioural construct that contributes to the performance of an individual at the work place and family life. Thus, EI plays an important role in shaping the life of every individual's performance at home and workplace. EI includes appraisal of emotion in the self and the others, and adaptive regulation of emotion to facilitate better performance and enhanced living. The ability to perceive the environment and adapt to the various changes is crucial in this dynamic era. In other words, EI is one's ability to succeed in coping with the environmental demands and pressures to promote and foster growth. Emotional and social intelligence means to effectively manage the personal, social and environmental change by diligently coping with the immediate situations, solving problems and making decisions as the need arise (Goleman, 1995).

WLB is about a balance between the demands of employee's family life and work life to achieve an overall performance and psychological wellbeing. EI improves employees' Work Life Balance (WLB). As one enters into job life, performance on balancing work and social roles becomes a strong contributor to how one feels. Thus, WLB is a comprehensive construct that includes an individual's job performance related wellbeing, the extent to which job experiences are rewarding, satisfying, devoid of stress and other negative personal consequences. It appears that there exists a nexus between EI and WLB, how people feel about their work and perform between the family life and work life (Miryala *et al.*, 2012). The research article reveals the impacts of EI on WLB among faculty members' performance at work and family life.

Statement of the Problem

During the last decade, working people faced lot of pressure especially after the globalisation and with the development of new technologies. The education sector is not an exception to this scenario. With the emerging growth of self-financing educational institutions and great expectations of the students and their parents, each institution competes with others for excellent efficiency, prodigious performance and unbeatable uniqueness. Hence, the expectation from the management is also comparatively high. In an academic environment, the expectation and the reality mostly contradict each other, thereby

leading to a competitive environment. This competitive reality poses a great challenge for emotional intelligence and worklife balance among the faculty members of the educational institutions, where the demand from the faculty is greater compared to those of government educational institutions (Altbach-Philip *et al.*, 2005).

Edwards *et al.* (2000) employed six general categories as mechanisms linking work and family. They are spillover, compensation, segmentation, resource drain, congruence and work family conflict. It is based on work-family conflict, which can be defined as a form of inter-role conflict in which work and family role demands are mutually incompatible so that meeting demands in one domain makes it difficult to meet demands in the other. Nonetheless, these categories are always backed by emotions which are not so much highlighted by them. Emotional Intelligence has mostly been associated with occupational stress, organisational commitment (Nikolaou *et al.*, 2002; Singh *et al.*, 2012), work attitudes, behaviour and outcomes (Carmeli, 2003). Miryala *et al.* (2012) and Sanchez-Vidal *et al.* (2012) consider WLB as a main construct in their articles to find out their perceptions of the same. A number of studies have proven that there is a correlation between EI and other behavioural constructs like job satisfaction, productivity of the employee, awareness of work life policy, family and organisational commitment, family and workplace conflicts, family and organisational support that contribute to WLB. Many researchers have found the

impacts of EI on executives' performance in service sectors (Yu-Chi, 2011; Higgs, 2004; Singh & AjeyaJha, 2012; Hopkins & Billimoria, 2007; Arthur, 2003). Some researchers have found the impacts of WLB on executives' performance in manufacturing sectors (White *et al.*, 2003; Hughes & Bozionelos, 2007). By reviewing various research articles, the researchers found that no research article has studied the impacts of EI on WLB among the faculty members' performance in the educational institutions where the challenge is greater and often tough. This motivates the researchers to study the same.

RESEARCH OBJECTIVES

The study is guided by the following objectives:

1. Study the impacts of EI on WLB among the faculty members' performance in the educational institutions.
2. Find out the level of EI and WLB among the performance of faculty members.
3. Study the impacts of personal demographics of the respondents on EI and WLB among faculty members' performance.

LITERATURE REVIEW

The term Emotional Intelligence (EI) was first used by Mayer and Salovey (1990), who postulated that EI involves the ability to perceive accurately, appraise and express emotion and regulate emotion to promote emotional and intellectual growth. EI is an essential factor responsible for determining

performance in work place and family life. Psychological wellbeing seems to play an important role in shaping the interaction between managers and employees in their work environment (Jorfi Hassan *et al.*, 2012).

EI has some unique variances in life satisfaction and that there is a conceptual overlap between EI and personality (Gannon & Ranzijn, 2005). Emotions are personal and subjective experiences caused by the complex interplay of physiological, cognitive and situational variables. It is argued that rather than being redundant, EI offers valuable insight into the current conceptions of personality (Mandai, 2004).

WLB: Concept and its Role in the Family and Work Environment

Work Life Balance (WLB) practices are defined in the literature as ‘any employer sponsored benefit or working condition that helps an employee to balance work and non-work demands’. Hence, WLB practices allow employees to enhance their autonomy in the process of coordinating and integrating work and non-work aspects of their lives. Individuals’ need of balance between work and personal lives has become one of the pivotal concerns of work and family academics (Felstead *et al.*, 2002). WLB is also defined as the ‘individual’s ability, with independence of age and gender of finding a life rhythm that allow them to combine their work with other responsibilities, activities or aspirations’ (Cascio, 2000). Higgs (2004) and Hopkins *et al.* (2007) proved in their research that

there is a significant difference in EI among the gender groups. They differ in perceiving and managing emotions. WLB is the need of an employee in achieving a balance between the demands of work lives and their family life which is nothing but adjusting work patterns for an overall performance. WLB enables the business to thrive, combine work with other responsibilities and aspirations (JyothiSree & Jyothi, 2012). Hence, WLB is achieving a satisfactory equilibrium between parental responsibilities, work and non-work activities among employees (Nirajet *et al.*, 2013).

There are about a hundred WLB practices (De Cieri *et al.*, 2005); nonetheless, there is no clear, widespread approach to classify them (Callan, 2007; Poelmans & Beham, 2008). HR practices that can be implemented to promote WLB among their employees are: (1) the flexible use of time, which includes flexi time, annual hours, credits for hours and compressed week, (2) Spatial flexibility to workers, which includes teleworking or videoconferences, (3) time reduction, it includes part-time work and shared work, (4) work leave, consists of maternity and paternity leave in excess of the official amount and leave of absence, and (5) counselling programme and employee assistance (Cascio, 2000).

WLB provides a scope for employees to balance responsibilities at workplace and interests outside the workplace and get reconciled by meeting their own needs and of their employers (Armstrong, 2006). An individual is satisfied with his or her work role and family role when the individual is

able to achieve a balance between the two. It consists of three components such as time balance (equal time for work and family), involvement balance (equal involvement in work and family) and satisfaction balance (equal satisfaction from work and family) (Greenhaus, 2003).

WLB is gaining importance in the academic world because of the difficulty they find in balancing personal and work life (Fleetwood, 2007; Rigby & O'Brien-Smith, 2010). This imbalance is due to women incorporation into the labour market, the existence of dual career couples and the desire to achieve higher levels of quality life (Greenhaus, 2008). The tensions between dual career couples bring about the transformation of family life. At the personal level, family functioning has become personal responsibilities, making the maintenance of both more vulnerable while at the cultural level, traditional values like gender role ideologies are challenged. The importance of work life and personal life still persists to role efficacy and emotional intelligence (Waite & Gallagher, 2000). When traditional values are lost and the gender roles are not clearly defined, individuals may experience difficulties in balancing their work and non-working activities. Men are interested to perform their job without more family responsibilities like women (Halrynjo, 2009).

Work-family balance is integration of work performance with family roles, but the incompatibilities between work and family responsibilities are because of limited time and energy (Hills *et al.*, 2001). Work and

non-work activities are compatible and at the same time promote growth depending on one's priorities of life (Kalliath, 2008). The problems of balancing life and work depend upon the time and energy allotted across various roles of life (Senecal *et al.*, 2001). Family or personal role includes caring for children, the sick or the elderly, non-caring domestic work like cleaning, cooking, shopping or home maintenance (Collins, 2007). Pressures in the life of the individual have increased because of the tension and complexity in the household life, particularly with the dual earners. Personal role also demands time for leisure, rest and relaxation (Hyman *et al.*, 2003).

The labour role demands the employees to be highly committed to their organisations (Hughes *et al.*, 2007). Managers expect the employees to work long hours and prioritise work over personal life. Policies and practices should comprise of Flexi time, Telecommuting, Compressed work week, Part-time work and Job sharing that foster WLB among the employees for effective performance (Lazar *et al.*, 2010). The restructuring of work time contributes for flexibility in human resource utilisation, which would contribute towards the employees' work family coverage (Arrowramth, 2002). Employee's desire for more autonomy in work time arrangements to minimise work-family conflicts (Bielenski *et al.*, 2002). There is a link between non-standard work time and lower turnover (Frye, 2007), but home-base work yield higher levels of performance and lower absenteeism (Kopelman *et al.*, 2006).

People express emotions in both verbal and non-verbal forms. Emotions influence decision-making, communication and interaction. Emotions are often used as control mechanisms by employees. They follow certain organisational practices that attract them and overlook their possible disadvantages (Doorewaard & Benschop, 2003).

Individual's response in different circumstances is defined by organisational and intra-group culture and norms. Some organisations may feel long working hours indicate commitment and productivity, but in reality it is a barrier to work-life balance (Kirby & Krone, 2002). Lack of support from the management, long working hours culture, financial pressure (White *et al.*, 2003), time pressures, lack of flexibility (Lewis, 2003), lack of importance from the superiors and lack of communication with the staff (Warren *et al.*, 2004; Kramer & Lanabert, 2001) are some of the barriers to WLB.

Over the past few years, financial crisis, organisational restructuring and intensive competition in the business environment on the account of economic uncertainty have fostered round the clock services among the workforce who negatively affect WLB and the employees' performance. Technological advancements like teleworking make employees to be available for the organization even during their holidays. Due to the economic crisis and insecurity in the labour market, employees feel that they need to prove their commitment to the organisation by a continual performance at

the workplace (Hyman *et al.*, 2003).

The inter role conflict between work and family create tension and problems to the employee. In order to cope up with this inter role conflict, many organisations and companies have promoted the implementation of WLB initiatives in recent years to foster employees' work/personal balance (Moen *et al.*, 2008).

The impact of work-life support is reflected in the reduction of absenteeism; lower stress level, higher levels of productivity and performance, satisfaction, commitment resulting in organisational effectiveness (Starrou, 2005). WLB practices in an organisation also serve as a means for attracting and retaining highly qualified professionals (Harrington & Ladge, 2009). There is a positive relationship between WLB practices in an organisation and shareholders' returns (Arthur, 2003). WLB practices improve the corporate image of an organisation in the market as it reflects the social responsibility of the organisation (Hughes & Bozionelos, 2007).

EI and the Impacts on WLB

EI plays a major role on WLB among employees' performance. Employees with high EI are in touch with their emotions and they can regulate them in a way that promotes well-being and the ability to perform in coping with environmental demand to promote balanced living (Waite & Gallagher, 2000). EI helps a person to build adaptive responses to work-related demands (Reuven Bar-On, 2005). People with high EI are high in Adaptive Coping

Style, while people with low EI have Avoidance Coping Style. Adaptive Coping Style helps a person in reducing his stress to perform better in the environment, whereas Avoidance Coping Style increases stress as a person either performs less or escapes from it (Singh, 2006).

Emotions of individuals influence the group they belong to; these emotions ripple out and influence the entire group dynamics besides influencing individuals' attitudes and behaviours (Barsade, 2002). People who are in positive emotions perform better and influence others too than those in negative emotions. Hence, people with higher EI are better performers at work and in social relationships. EI is also positively associated with job performance (Grewal & Salovey, 2005). Matthews *et al.* (2006) conducted a research comparing EI and the personality factors of the Five Factor Model - OCEAN (Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism) as predictors of task-induced stress responses. The study proved that people with high EI have better ability to cope with work pressures and are highly committed towards their work. There is a positive correlation between EI and organisational commitment, whereby EI is also found to be a determinant of employees' loyalty to their organisation (Nikolaou & Tsaousis, 2002).

When employees have a participatory and problem-solving approach to work-life, they are more committed to their work place and home, attaining a balance of performance between both work and life

(Agarwala, 2009). Emotional exhaustion has a negative impact on job performance in terms of organizational commitment and job satisfaction (Moon & Hur, 2011). Employees with high EI are able to reduce or transform the negative effects of emotional exhaustion on job performance (Wu Yu-Chi, 2011). This perception and management of emotions lead to differences in employees' awareness, conflict, and willingness to creativity, innovation and communication (Hopkins, 2007).

With the raising competition, faculty members too manifest the symptoms of burnout, due to Work Life imbalance, which directly or indirectly affect their teaching performance (Shukla *et al.*, 2008). However, if faculty members have better EI, they are able to likely balance their emotions for a better WLB and will eventually have better teaching performance. This is especially true for the private universities, where the demand and expectations of the students, parents and management are very high (Singh *et al.*, 2012).

RESEARCH METHODOLOGY

Type of Research

The purpose of adopting the descriptive research was to examine a phenomenon that is occurring at a specific places and time. Based upon this, descriptive type of research was adopted in this study.

Sample

India has more than 33,000 colleges and the target population of the study is the

0.8 million faculty members working in educational institutions (Ernst & Young, 2012). The descriptive type of research is followed in this study. The sample size can be derived by using the following formula:

$$n = (z\sigma/d)^2.$$

Where :

z = Value at a specified level of confidence

σ = Standard deviation of the population

d = difference between population mean and sample mean

It is difficult to find the standard deviation and the mean of population, the researchers used convenience sampling method and selected three educational institutions in Vellore District in Tamil Nadu, India. Faculty members, whoever was approachable and ready to respond, were selected as the sample. This is the main limitation of the study. Thus, to avoid the result biasness among faculty members performance in educational institutions, the investigators had approached 25 faculty members in each educational institution, making the statistical sample of this study as 75 faculty members.

Research Instrument

This study is a purely empirical in nature, hence questionnaire is the sole instrument used for data collection in this present study. The researchers developed a well-structured questionnaire which consists of three parts. The researchers carried out a validity test for

the variables in the questionnaire to measure the impacts of EI on WLB and obtained $\alpha=0.8$. The questions used for the validity test include response towards “worry about work when they are not actually at work”, their response about “the amount of time spent at work”, “missing about their quality time with their family and friends because of pressure of work”, etc. Apart from the researchers’ developed questions for the questionnaire, some questions were adopted from the Emotional Intelligence Scale (EIS) developed by Wong and Law (2004), Mayer Salovey Caruso Emotional Intelligence Scale (MSCEIS) given by Mayer, Salovey and Caruso (2004), and the Quality of Work Life Scale (QOWLS) developed by Darren Van Laar, Julian Edwards and Simon Easton, (2007). Part I consists of the demographic background that requires the participants to provide information such as gender, age, qualification, income, marital status, number of children, persons who take care of their children and the number of dependents in the family. There are 11 items in Part II that measures the level of EI and 16 items in Part III to find out the level of WLB among the respondents. The researchers adopted the five-point likert scale for EI (for example of items such as ability to recognise emotions, conflict with the family, misunderstanding with the colleagues etc.) and WLB (for example of items such as Amount of time spent at the work place, missing about the quality time with the family and friends because of pressure of work, etc.) measurements.

Data Analysis Procedures

The data collected from the questionnaires were keyed in and analysed by using SPSS (Statistical Package for Social Sciences) for statistical analysis. Pearson’s Chi-Square test was employed to estimate whether two random variables are independent. In this regard, the researchers were finding out the level of association between the marital status and the response towards present pay. In general, the married respondents have more commitments and are emotionally attached with the pay, whereas unmarried respondents did not worry much like the married respondents about the present pay norms in the educational institutions. Correlation coefficient was used to find out the degree of relationship between the independent variable and the dependent variable. ANOVA was used to find the significant variance between one independent with many dependent variables. The researchers analysed the data using discriminant analysis to measure the association between one dependent (dichotomous question) and many independent variables. Meanwhile, coefficient of variation was used to find out the consistency of impact on EI among the faculty members’ performance.

FINDINGS AND ANALYSIS OF DATA

Chi-Square Test

H₁: There is a significant association between marital status and their response towards present pay (Emotional Intelligence)

TABLE 1.1
Chi-Square

Particulars	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.585	15	.410
Likelihood Ratio	18.306	15	.247
Linear-by-Linear Association	.004	1	.953
N of Valid Cases	75		

TABLE 1.2
Symmetric Measures

Particulars	Value	Approx. Sig.
Nominal by Nominal Phi	.456	.410
Cramer's V	.263	.410
N of Valid Cases	75	

TABLE 1.3
Directional Measures

Particulars			Value	Asymp.Std. Error	Approx. T	Approx. Sig.
Nominal by Nominal	Lambda Goodman and Kruskal tau	Symmetric	.096	.065	1.433	.152
		Feeling about the present pay Dependent	.034	.034	1.007	.314
		Marital Status Dependent	.130	.096	1.271	.204
		Feeling about the present pay Dependent	.084	.035		.235
		Marital Status Dependent	.049	.019		.247

From the output given in Table 1.1, the Chi-square reads a significance level of 0.41 at 95 per cent confidence level. It is greater than the hypothetical value of 0.05, hence H1 is accepted and there is a significant association between respondents' marital status and their response towards their present pay. Cramer's V 0.263 in Table 1.2 reveals that there is a moderate association between marital status and their response towards their present pay. The asymmetric lambda value 0.034 in Table 1.3 infers that there is a 3.4 percent error reduction in predicting the response towards the present pay when the respondents' marital status is known. If the lambda value increases in the output, the researchers could predict more precisely the response towards the present pay when the marital status of the respondents is known. Here, the researchers cannot predict the response towards the present pay when the marital status of the respondents is known and the error level is 96.4%.

Analysis of Variance

- H₂: There is a variance between marital status and their response towards worry about work when they are not actually at work (Emotional Intelligence)
- H₃: There is a variance between marital status and their response about the amount of time spent at work (Work Life Balance)
- H₄: There is a variance between marital status and their response about missing about their quality time with their family and friends because of pressure of work. (Work Life Balance)

From Table 2.1, for the first item's highest mean score is 3.10, which infers that the married respondents with two children are worried more about work when they were not at work, while the least mean score is 2.0, inferring that the married respondents with four children are rarely worried about work when were not at work. The second item's highest mean score is 4, which proves

TABLE 2.1
Descriptive

Particulars	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Mini	Max	
					Lower Bound	Upper Bound			
Worry about work when actually not at work	Not married	21	3.00	.894	.195	2.59	3.41	1	5
	married & 1 child	18	3.06	.802	.189	2.66	3.45	1	5
	married & 2 children	21	3.10	.768	.168	2.75	3.45	2	5
	married & 3 children	12	2.58	1.084	.313	1.89	3.27	1	5
	married & 4 children	1	2.00	.	.	.	.	2	2
	married but no child	2	3.00	.000	.000	3.00	3.00	3	3
	Total	75	2.96	.861	.099	2.76	3.16	1	5
feeling about the amount of time spent at work	Not married	21	3.67	.856	.187	3.28	4.06	2	5
	married & 1 child	18	3.17	1.043	.246	2.65	3.69	1	5
	married & 2 children	21	3.90	.625	.136	3.62	4.19	2	5
	married & 3 children	12	3.17	1.193	.345	2.41	3.92	1	5
	married & 4 children	1	2.00	.	.	.	.	2	2
	married but no child	2	4.00	.000	.000	4.00	4.00	4	4
	Total	75	3.52	.950	.110	3.30	3.74	1	5
Missing of quality time with family/ friends because of pressure of work	Not married	21	2.95	.865	.189	2.56	3.35	1	5
	married & 1 child	18	3.67	.907	.214	3.22	4.12	3	5
	married & 2 children	21	3.81	.873	.190	3.41	4.21	2	5
	married & 3 children	12	4.00	1.044	.302	3.34	4.66	2	5
	married & 4 children	1	5.00	.	.	.	.	5	5
	married but no child	2	5.00	.000	.000	5.00	5.00	5	5
	Total	75	3.61	.999	.115	3.38	3.84	1	5

TABLE 2.2
ANOVA

Particulars		Sum of Squares	df	Mean Square	F	Sig.
Worry about work when actually not at work	Between Groups	3.209	5	.642	.857	.514
	Within Groups	51.671	69	.749		
	Total	54.880	74			
feeling about the amount of time spent at work	Between Groups	10.077	5	2.015	2.455	.042
	Within Groups	56.643	69	.821		
	Total	66.720	74			
Missing of quality time with family/friends because of pressure of work	Between Groups	17.596	5	3.519	4.322	.002
	Within Groups	56.190	69	.814		
	Total	73.787	74			

that the married respondents with no child are happy with the amount of time spent at work and the least mean score is 2, which infers that married respondents with four children are unhappy with the amount of time spent at work. The third item's highest score is 5, which clearly indicates that the married respondents with four children and married respondents with no child always miss the quality time with their family and friends because of the pressure at work, whereas the least mean score is 2.95, which infers that the unmarried respondents sometimes miss out quality time with family and friends because of the pressure of work than the married respondents. From the mean scores of Table 2.1 proves that the married respondents have less EI and feel

difficult to manage their work life balance than the unmarried respondents.

The second hypothesis is that there is a variance between marital status and the response towards worry about work when they are not actually at work. Table 2.2 above infers that the significance value is 0.514, which is greater than the p value 0.05 and H2 is rejected. Hence, there is no significant variance between marital status and the respondents' response towards worry about work when they are not actually at work. In the same table of output referred above, the significance of F is 0.042 for the respondents' feeling about the amount of time spent at work, and 0.002 for missing of quality time with family/friends because of work pressure. Since these two values are

TABLE 3.1
Symmetric Measures

Particulars		Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Interval by Interval	Pearson's R	.064	.117	.545	.587
Ordinal by Ordinal	Spearman Correlation	.068	.118	.582	.562
N of Valid Cases		75			

lesser than the hypothetical value 0.05, it is concluded that at a 95 percent confidence level H3 and H4 can be accepted. Hence, there is a variance between marital status with the amount of time spent at work and missing their quality time with family and friends because of work pressure.

Correlation Analysis

Relationship between age and the response towards different ways of managing stress (Emotional Intelligence and Work Life Balance)

The Pearson’s correlation in Table 3.1 reads a value of 0.064, which reveals that there is a positive correlation between age and the different ways of managing stress. Most of the respondents below 35 years of age managed their stress arising from work as follows: entertainment, music, surfing on the social network and chatting with their friends. Other than the respondents below 35 years of age, no one spent time on dancing as a means to manage their stress arising from work. The respondents above 56 years of age never preferred physical exercises as a means to manage their stress arising from their work.

Discriminant Analysis

H₅: There is a significant association between the ability to balance work and life with age, gender, marital status, number of children, persons who help in taking care of the children, average hours worked per week in the organization, annual salary, number of persons the respondents care for and the number of dependents (Work Life Balance with Emotional Intelligence).

TABLE 4.1
Wilks’ Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.692	18.949	9	.026

TABLE 4.2
Standardized Canonical Discriminant Function Coefficients

Particulars	Function
	1
Gender	1.092
Marital Status	.388
Age	.588
Average hrs worked per week	.068
Annual Salary	-.262
Taking care of the children	-.033
Respondents take care of	.753
Number of dependents	-.656
Hours spent with family	-.693

TABLE 4.3
Canonical Discriminant Function Coefficients

Particulars	Function
	1
Gender	2.294
Marital Status	.327
Age	.635
Average hrs worked per week	.066
Annual Salary	-.389
Taking care of the children	-.019
Respondents take care of	.539
Number of dependents	-.299
Hours spent with family	-.816
(Constant)	-3.850

Unstandardized coefficients

TABLE 4.4
Functions at Group Centroids

Able to balance work life and Personal life	Function
	1
Yes	-.440
No	.977

Unstandardized canonical discriminant functions evaluated at group means

TABLE 4.5
Classification Results

Able to balance work life and Personal life		Predicted Group Membership		Total	
		Yes	No		
		Original	Count		Yes	30	10	40
		No	5	13	18
	%	Yes	75.0	25.0	100.0
		No	27.8	72.2	100.0

74.1% of original grouped cases correctly classified.

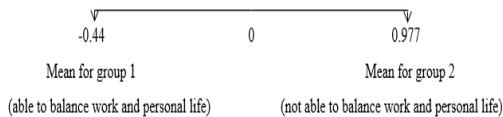
The classification matrix in Table 4.4 indicates that the discriminant function obtained is able to classify 74.1 per cent of the 75 objects correctly. The Wilks' Lambda value in Table 4 is 0.692. It is between 0 and 1, which indicates better discriminating power of the selected variables. The probability value of the F test indicates that the discrimination between the two groups is highly significant. This is because $P < 0.026$, which indicates that the F test would be significant at a confidence level up to $(1 - 0.026) \times 100$ or 97.4 percent. Hence, H_0 is accepted.

The standardised coefficient in the output in Table 4.1 reveals that gender is the best predictor, with the coefficient of 1.092, followed by whom the respondents take care of with the coefficient of 0.753, age with the coefficient of 0.588, marital status with the coefficient of 0.388, average hours worked per week in the organization with the coefficient of 0.068, number of hours spent with the family with the coefficient of -0.693, number of dependents with the coefficient of -0.656, annual salary with the coefficient of -0.262, and the persons who help the respondents to take care of their children are the last with the coefficient of -0.033.

The means of the canonical variables in Table 4.3 give the new means for the transformed group centroids. Thus, the new mean for group 1 (able to balance work and personal life) is -0.44 and the new mean for group 2 (not able to balance work and personal life) is 0.977. This means that the midpoint of these two is 0. This is clear

when the two means are plotted on the straight line and their mid points are located, as shown in the following chart.

Chart 1



If the discriminant score of a respondent falls to the right of the mid points, the respondent has the ability to balance work and personal life, but if the score of the respondent falls to the left of the midpoint, the respondent does not have the ability to balance work and personal life. Therefore, any positive (greater than 0) value of the discriminant score will lead to classification as ‘ability to balance work and personal life’ and any negative (less than 0) value of the discriminant score will lead to classification as ‘not able to balance work and personal life’.

Unstandardized discriminant function is: $Y = -3.850 + \text{gender} (2.294) + \text{number of children} (0.327) + \text{age} (0.635) + \text{average hours worked per week in the organization} (0.066) - \text{annual salary} (0.389) - \text{persons who help to take care of the children} (0.019) + \text{persons the respondents take care of} (0.539) - \text{number of dependents} (0.299) - \text{number of hours spent with the family} (0.816)$.

Y would give the discriminant score of any person whose gender, marital status and number of children, age, average hours worked per week in the organisation, annual

salary, persons who help to take care of the children, persons the respondents take care of, number of dependents and the number of hours spent with the family were known.

For example, a married female faculty member with two children belonging to the age group of less than 35 works 10-13 hours per week with the annual salary of less than 5,00,000, spouse helping in taking care of the children, takes care of two dependent adults spends 2-3 hours with the family in a day will not be able to balance work and life. This can be proven in the following equation.

The researchers coded in SPSS, as follows: A female respondent (coding in SPSS is 2), who has got two children (2), who is below 35 years of age (1), works for 10 - 13 hours per week (2), for an annual salary within 5,00,00 (1), helped by spouse in taking care of the children (1), takes care of (2) dependent adults (2) spends 2-3 hours (2) with the family in a day. Plugging these values into the discriminant function, the discriminant score Y would be:

$$Y = -3.850 + 2 (2.294) + 2 (0.327) + 1 (0.635) + 2 (0.066) - 1 (0.389) - 1 (0.019) + 2 (0.539) - 2 (0.299) - 2(0.816)$$

$$Y = 0.649$$

From chart 1, the Y value of 0.649 above shows the decision rule of discriminant score to the right of the midpoint 0 leads to a classification of ‘not able to balance work and personal life’ group.

TABLE 5.1
Descriptive Statistics

Particulars	N	Mean	Std. Deviation	Coefficient of Variation %
Ability to recognise emotion	75	3.23	.924	28.61
Conflict/ misunderstanding with the family	75	2.75	1.015	36.91
Conflict/misunderstanding with the colleagues	75	3.20	1.013	31.66
Conflict/misunderstanding with the superiors	75	3.93	.977	24.86
Valid N (listwise)	75			

Level of Emotional Intelligence and Handling of Conflicts (Emotional Intelligence)

The items in the questionnaire require respondents to indicate their responses based on 1 to 5 Likert scale. In this study, the respondents' responses with the mean score of 0.00 to 1.99 are considered as low, while 2.00 to 3.99 are considered as moderate, and the responses with the mean scores of 4.00 to 5.00 are considered as high. The findings presented in Table 5 indicate that the respondents are moderately aware of their own emotions. Hence, they also applied moderate level of emotions in handling the conflicts with the family members, colleagues, and their superiors. According to Mayer and Salovey (1990), having the ability to understand emotions allows an individual to accept and handle both pleasant and unpleasant feelings. From the table, the coefficient of variance is 24.89%. It infers that majority of the faculty members' performance is affected by conflict/misunderstanding with the superiors. The coefficient of variance

of 36.91% reveals that only few faculty members' performance is affected by conflict/misunderstanding with their family members.

FINDINGS AND CONCLUSION

From this research, it is evident that the faculty members of the educational institutions were moderately aware of their own emotions. Hence, most of the faculty members' performance is affected by conflict/misunderstanding with their superiors, while a few of them have conflict/misunderstanding with the family members as well. This finding contradicts with the study of Edwards *et al.* (2000), Moen *et al.* (2008) and Greenhaus (2003). The respondents below 35 years of age manage their stress arising from work through entertainment, music, dance, surfing on the social network and chatting with their friends, whereas those above 56 years of age never preferred physical exercises as a means to manage the stress arising from their work. This is indeed an evidence that there is a positive correlation between age

and ways of managing stress arising from work. It is revealed from the analysis that the married faculty members perform less at home and in working environment compared to the unmarried faculty members. This finding of the study is similar to the study of Hymanl *et al.* (2003). It is evident from the analysis that the married respondents have more commitments and are emotionally attached with the pay, while the unmarried respondents are not worried much like the married respondents about the present pay norms in the educational institutions. From the analysis, it also found that the faculty members' present pay plays a major role in controlling EI on WLB among their performance in the working environment and at home. This finding is also similar to the study of Greenhaus (2008), and Waite and Gallagher, (2000). It is proven from the analysis that the married respondents have less EI and feel difficult to manage worklife balance than the unmarried respondents. From this research, it can be concluded that EI has a direct impact on WLB, which is reflected in the performance of the faculty members.

IMPLICATIONS OF THE STUDY

In the world of tension and turmoil, it is very important for educators to be equipped with EI for a better WLB and an effective performance. Therefore, the persons involved in educational policy making and professional preparation should consider the importance of the influence EI on WLB and provide them with excellent pay, performance-based

incentives, promotions, flexible working hours, arranging grievance cell to solve their issues, personal counselling, arrange some training programmes on ways to reduce academic pressure and personal life stress, arrange picnic which may be useful to bring unity among faculty members and also with superiors, informal clubs, faculty accommodation, good working environment and working conditions towards improving faculty performance in the Institution.

This research contributes further to the significance of EI on WLB and effective performance in applied settings. Although the study is limited to the faculty members in educational institutions in India, it can be extended to other professional groups in India and abroad to get a significant insight into understanding the contribution of EI on WLB that leads to better performance.

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Revisiting Thailand’s Aggression Against Cambodia, 1953–1962: An Expected Utility Theory of War Initiation

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ABSTRACT

The expected utility theory of war initiation is used to examine Thailand’s bellicosity against Cambodia between 1953 and 1962 in order to evaluate whether Thai political decisions to start a war-threatening conflict were rational. An expected utility model analysis using EUGene, the data management utility software, suggests that Thailand’s decisions to initiate war with Cambodia were rational in accordance with the expected utility decision rules. Hence, despite being counter-intuitive, Thailand’s aggression against Cambodia as well as Thai foreign policy in general during the specified period is not unreasonable.

Keywords: Thailand, Cambodia, Preah Vihear temple, expected utility theory of war initiation, EUGene

INTRODUCTION

“We Thai bend like the bamboo but we do not break,” a Thai senior official once said to a foreign diplomat (Singh, 1979, p.123). Thailand’s foreign policy behaviour functions as a barometer for the shifting balance of political power in Southeast Asia. By rapidly aligning itself with the strongest actor in the region at all times,

the bamboo-in-the-wind tradition has been long acknowledged as the achievement of Thai diplomacy that preserved the kingdom from external invasions (Singh, 1979). In addition, it has signified the acumen of Thai leaders, as Chachavalpongpun (2010, pp.63-64) pointed out, that “Thai diplomacy has been inherited through time in the hands of kings, warriors and generals,” and therefore, admiration for it has been utilised by leaders as an ingredient of Thai nationhood and nationalism in order to attain political goals, and sometimes to serve their own personal aspirations. Without the participation of the public, it can be argued that nationalism is a

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seed that could grow into a catastrophe, from disagreements through interstate conflicts to great wars (Hinsley, 1972; Schrock-Jacobson, 2012) as it made foreign policy irrational (Hudson, 1972; Layne, 2006). Because of their anomalous policy, some nationalist dictators have been accused of being insane; Muammar Gaddafi is a good example (Mandel, 1984). Likewise, Thailand's military dictators, Field Marshal Phibun Songkhram and Field Marshall Sarit Thanarat, particularly the former, have more often than not been called insane. Plausibly, they might be as accused; however, it can be argued that the foreign policy under such nationalist dictatorships, even that leading to the aggression against Cambodia, initiated in 1953, and the subsequent armed conflicts, is not necessarily irrational.

This paper examines whether the Thai foreign policy from the 1950s up until the early 1960s was rational. In particular, the article probes if the two despots' political decisions to initiate war-threatening conflict with Cambodia between 1953 and 1962 were reasonable. This research adopted the expected utility theory of war initiation, formulated by De Mesquita (1981), to evaluate these decisions scientifically. Then, to process the data, EUGene, the data management utility programme developed by Bennett and Stam (2000), was employed to compute Thailand's expected utility in starting a war with Cambodia in the specified period. The hypotheses of this research were:

The nationalist and dictatorial nature of the Thai regimes did not inexorably lead to

an irrationality of Thailand's foreign policy toward Cambodia during the designated period.

The expected utility scores of all war-threatening conflicts initiated by Thailand between 1953 and 1962 were more than zero; hence, the political decisions were based on rationality.

LITERATURE REVIEW

Thailand's foreign policy during the 1950s, like that of other developing nations, was shaped by nationalism and irredentism (Viraphol, 1976), particularly during the regimes of Field Marshal Phibun Songkhram and Field Marshall Sarit Thanarat. This was based on the self-image of Thai nationhood: the chauvinist cult of the 'Greater Thai Empire' superimposed on the idea of a golden land (Suwannaphum) (Bunyavejchewin, 2013; Busbarat, 2012; Chachavalpongpun, 2005; Suwannathat-Pian, 1996). The chauvinist image of the nation not only shapes how Thais see themselves but also how they view their neighbours: "Southeast Asia is composed of small nations. [...] Siam [Thailand], being situated in the centre of the group and the only independent country so far, naturally will be looked up to as an 'elder brother' nation" (Tarling, 2006, p.71). That might be the reason why many scholars interpreted Thailand's belligerent policy towards Cambodia between 1953 and 1962 as a product of Thai nationalism (Baker & Phongpaichit, 2005; Bunyavejchewin, 2013; French, 2002; Kasetsiri *et al.*, 2013; Walyapechra, 1975; Winichakul, 2008).

Although there are a number of studies on the Thai-Cambodian conflict over the Preah Vihear temple, they mostly emphasised the forces of nationalist sentiment and historical legacy, rather than explained the conflict via the lens of international theory. It is not an exaggeration to say that there is no study using the theory and models of international politics to explain the conflict between these two states. This leads to a gap in research, which becomes obvious when researchers tend to blame “unreasonable patriotism” (Kasetsiri *et al.*, 2013, p.10) as being an irrational motive leading to war. Kasetsiri *et al.* (2013, p.1) stated that “Thai-Cambodian relations...have been marred by hatred, mutual suspicion, and even wars. The hostility that has existed in this relationship has largely been sustained by the force of nationalism on both sides.” Nevertheless, this research contends that a political decision to initiate war-threatening conflict, even when driven by nationalist fire, is not necessarily irrational in itself. Rationality, De Mesquita (1981, p.31) argued, “simply implies that the decision maker uses a maximizing strategy in calculating how best to achieve his goals.” In other words, “The rationality assumption tells us nothing about how actors form their preferences but rather shows how actors behave, given their preferences.” In this sense, rational and normal behaviour are not the same: “Most normal people are rational, but some rational people are not normal.” A decision-maker like Adolf Hitler, for instance, is “completely rational though aberrant and abhorrent.” Likewise, decision-makers

like Field Marshal Phibun Songkhram and Field Marshall Sarit Thanarat are certainly rational, notwithstanding their chauvinistic idiosyncrasy.

This study assumed that all decision-makers are rational; therefore, conflict does not occur unintentionally. The premise of rationality allowed the researcher to examine Thailand's bellicose behaviour using the scientific theory of international conflict and war. In particular, the expected utility theory of war initiation, pioneered by De Mesquita (1981), was applied in this research to enable the testing of hypotheses in accordance with the scientific tradition. The theory and its richness, as Woods (1996, pp.21-22) pointed out,

shed all complex historical and social details from the analysis, and enable us to arrive at a range of outcomes and alternatives, including some which are counter-intuitive. A second strength [...] is that assumptions and 'intuitions' are not buried within the analysis but are, to some extent, laid out as a priori assumptions, enabling others to assess or alter them. A third strength [...] is that it enables prediction [...] Finally, because [it] attempt[s] prediction [...] the results [...] can be readily and transparently tested against actual outcomes which they are supposed to have predicted.

Thus, the theory offers a scientific, as well as new, explanation, which is a missing link in the existing literature on the Thai-Cambodian conflict primarily dominated by historical research. The expected utility theory is delineated in the next section.

The Expected Utility Theory of War Initiation

The expected utility theory originally emerged as an explanatory and forecasting model of microeconomic behaviour based on logical deduction and is generally accepted as the cornerstone of microeconomics because of its predictability and logical elegance (De Mesquita, 1989). In the field of international politics, the expected utility theory was first introduced by De Mesquita as a rational-choice model for investigating the initiation of interstate conflict and war, in particular, the indispensable conditions in terms of material costs and benefits for initiating war. The expected utility theory of war initiation, therefore, is the hypothesised model to “discriminate between those who might expect a gain from war and those who would rationally expect to suffer a net loss if they started a war” (De Mesquita, 1981, p. 46).

De Mesquita (1989) portrayed the kernel of the expected utility model as follows:

1. Decision-makers are rational in that they can rank options as to their preference.
2. The preference order is transitive.
3. Decision-makers recognise the intensity of their preference, with that intensity of preference constituting utility.
4. Decision-makers consider possible options of attaining favourable ends with reference to the product of the probability of achieving possible outcomes and the utility related with the outcomes.
5. Decision-makers always opt for the option with the topmost expected utility.

Thus, like decision-making in a microeconomic model, the expected utility model assumes that decision-makers will make an effort to achieve the maximum available net gain, based on collating cost and benefit of options given the risk levels associated with specific outcomes, through probability calculation (Geller & Singer, 1998).

According to De Mesquita (1980; 1981), the expected utility theory of war initiation consists of five major assumptions:

1. States are viewed as ‘black boxes’ or unitary actors in that their foreign policies are the product of transitive preferences determined by a strong leader, the single decision-maker; accordingly, decisions to initiate interstate conflict and war are the product of unanimous decision-making calculated by a single decision-maker.
2. Decision-makers are rational expected utility maximisers and the maximising behaviour of the leaders is conditioned by two assumptions: 1) one state’s utility for another state is a positive function of the extent to which both states share the same policy view; therefore, states’ utilities are dictated by the congruence

of foreign policy intentions between states; and 2) one state's probability of victory in conflict with another state or alliance is a positive function of the relevant state's capabilities collated with those of each other relevant power. For this reason, a strong state has a higher probability of positive results against a weaker state than against a stronger one.

3. Differences in decision-makers' tendencies toward risk-taking have an effect on their decision-making. In this model's usage, risk-taking refers to a situation in which an actor knows the probability of achieving favourable outcomes before manoeuvring a course of action.
4. Decision-making is affected by uncertainty concerning the behaviour of other states. Uncertainty, in this context, refers to a situation in which an actor must make a decision when the probability of success of a course of action is unknown.
5. State's power diminishes over distance. Geographical distances impact the extent of a state's power, despite the fact that armed forces can be moved to operate in other regions of the world. The diminution of national power, as indicated by Kenneth Boulding (cited by De Mesquita, 1981), is caused by at least four factors: military operation over a long distance 1) generates organisational and command problems; 2) endangers military morale; 3) induces

domestic disagreement; and 4) reduces the strength of soldiers and military equipment.

With regard to assumptions (3) and (4), the model recognises that decision-makers with the same outcome preferences may make decisions differently due to the sensitiveness to risks and uncertainty (De Mesquita, 1980).

In expected utility calculations, cardinal utilities must be assumed according to De Mesquita (1980). Additionally, to formulate expected utility decision rules, the model assumes that utility values are attached to the perception of the level of agreement on policy options: the perception of perfect agreement on policy options is shown in a utility score of +1 and the perception of perfect disagreement in a utility score of -1.

These are the expected utility theory's assumptions. The theoretical foundation of the expected utility model requires a closer look as well. However, only the formulation of the equation (De Mesquita, 1981) applied by EUGene in computing the expected utility of war initiation (Bennett & Stam, 2000) is outlined here. In his expected utility model, De Mesquita (1980; 1981) classified state actors who could have an impact on war-threatening conflict initiation into seven types as follows:

1. The potential initiator (henceforth called *i*);
2. The potential defender (henceforth called *j*);

3. Those states whose policies are perceived by *i* as friendly towards *i*, but not towards *j* (henceforth called k_1);
4. Those states whose policies are perceived by *i* as friendly towards *j*, but not towards *i* (henceforth called k_2);
5. Those states whose policies are perceived by *i* as friendly towards both *i* and *j* (henceforth called k_3);
6. Those states whose policies are perceived by *i* as neither friendly towards *i* nor towards *j*, but as friendly towards other third parties (henceforth called k_4);
7. Non-aligned states whose policies are perceived by *i* as neither friendly towards *i*, nor towards *j*, nor towards other third parties (henceforth called k_5).

When decision-makers consider the expected utility of war initiation, the anticipated gains and losses significantly depend on three important factors: 1) the relative capabilities of the initiator and the defender; 2) the value the initiator places on changing the defender's policies in comparison to the changes in policies that the initiator must accept if the defender wins; 3) the relative power and interests of third parties that could intervene in the war (De Mesquita, 1981).

In a bilateral war-threatening conflict, the war initiator believes that the positive results of war provide an opportunity to change the defender's policies to align them with the initiator's own national interest (De Mesquita, 1981). In this sense, the differences in policies leading to war

show the maximum utility of change the initiator wishes to achieve. If U_{ii} is the utility that the initiator *i* attributes to its most desirable policy option (therefore $U_{ii} = 1$), the maximum change in the policies of the defender *j* is the difference between the policies *i* demands *j* to execute and *j*'s existing position: that is, $U_{ii} - U_{ij}$ where U_{ij} is less than or equal to U_{ii} . On the contrary, the utility of *i*'s defeat in war is $U_{ij} - U_{ii}$ (i.e. the war ends in favour of *j*).

Apart from calculating the current relationship with *j*, *i* also analyses the estimated future of its relations with *j*. If *i* postulates that the relationship will improve i.e. *j*'s policies will move closer to the position demanded by *i* the existing conflict may be moderated. This can be indicated as follows:

$$\Delta(U_{ii} - U_{ij})_{t_0 \rightarrow t_n} < 0$$

Conversely, if *i* expected the worsening of relations, then the current conflict may be intensified. This can be indicated as follows:

$$\Delta(U_{ii} - U_{ij})_{t_0 \rightarrow t_n} > 0$$

As a consequence, De Mesquita (1981) defined *i*'s expected utility of a bilateral war with *j* [$E(U_i)_b$] as follows:

$$E(U_i)_b = [P_i (U_{ii} - U_{ij}) + (1 - P_i) (U_{ij} - U_{ii})]_{t_0} + P_{(it_0)} [\Delta(U_{ii} - U_{ij})]_{t_0 \rightarrow t_n} + (1 - P_{(it_0)}) [\Delta(U_{ij} - U_{ii})]_{t_0 \rightarrow t_n}$$

[Equation 1]

where

U_{ii} = *i*'s utility of *i*'s favoured perception of external affairs; $U_{ii} = 1$ by definition;

U_{ij} = i 's utility of j 's policies which can deviate between 1 and -1;

$(U_{ii}-U_{ij})_{t_0}$ = i 's perception of the expected gains from winning a bilateral conflict with j so that i can redirect j 's policies in a way that serves i 's interest i.e. it is i 's calculation concerning the differences between the policies i wants j to execute and i 's view of j 's existing policies; hence, it is assessed at time t_0 ;

$(U_{ij}-U_{ii})_{t_0}$ = i 's perception of the possible loss when failing in a bilateral conflict with j where j then can align i 's policies with j 's interest. This term, like the previous one, is evaluated at time t_0 ;

$\Delta(U_{ii}- U_{ij})_{t_0 \rightarrow t_n}$ = i 's perception of the expected shift in the difference between i 's view and j 's policies over the period from t_0 , the present time, till t_n , a future time. This term indicates i 's perception of expected future policy gains from j under the assumption that there is no war;

$\Delta (U_{ij}- U_{ii})_{t_0 \rightarrow t_n}$ = i 's perception of the expected shift in the difference between the possibility that j would change i 's policy view in the future and the current policies of j . This term indicates i 's perception of expected future policy losses to j over the period time t_0 to t_n under the assumption of no war;

P_i = i 's current perception of the probability of victory against j in a bilateral war-threatening conflict; and

$1-P_i$ = i 's current perception of the probability of failing against j in a bilateral war-threatening conflict.

It should be noted that as $(U_{ii}- U_{ij})+(U_{ij}- U_{ii})=0$, the model treats a bilateral war as a zero-sum game; thus, the result is solely determined by the relative capabilities of the initiator i and the defender j (De Mesquita, 1981).

Nevertheless, more often than not decision-makers do not calculate only the strength and interests of their opponent. Rather, the plausibility that third parties may intervene both directly and indirectly in the conflict is also factored in the calculation. Thus, apart from the bilateral conflict equation, De Mesquita (1981) proposed two more equations that represent a multilateral war i.e. scenarios where third parties are involved in the conflict. Nevertheless, third parties' contributions in aiding the initiator or the defender vary by the third parties' expected utility of each side's victory. Decision-makers therefore have to assess to what extent third parties are anticipated to contribute to the victory or defeat of the initiator or the defender. The second and third equations represent i 's calculation of the value the third party k is expected to contribute to support i 's or j 's policies. i 's expected utility from a scenario where each third party k aids the policies of i is as follows:

$$E(U_i)_{k11} = (P_{ik}U_{iki}+(1-P_{ik})U_{ikj})_{t_0} + P_{ikt_0}(\Delta U_{iki})_{t_0 \rightarrow t_n} + (1-P_{ik})_{t_0}(\Delta U_{ikj})_{t_0 \rightarrow t_n}$$

[Equation 2]

i's expected utility from a scenario where each third party *k* supports *j* is as follows:

$$E(U_i)_{kl}^2 = [(1-P_{jk}) U_{iki} + P_{jk} U_{iki}]_{t_0} + (1-P_{jk})_{t_0 \rightarrow t_n} + P_{jkt_0} (\Delta U_{iki})_{t_0 \rightarrow t_n}$$

[Equation 3]

where

U_{iki} = *i*'s perception of the utility to be gained from each third party actor;

U_{ikj} = *i*'s perception of the utility to be gained by *j* from each third party actor;

P_{ik} = *i*'s perception of its probability of victory against *j* assuming that third party *k* supports *i*;

$1-P_{ik}$ = *i*'s perception of its probability of losing against *j* assuming that third party *k* supports *i*;

P_{jk} = *i*'s perception of its probability of losing against *j* assuming that third party *k* supports *j*;

$1-P_{jk}$ = *i*'s perception of its probability of victory against *j* assuming that third party *k* supports *j*;

$\Delta U_{ikit_0 \rightarrow t_n}$ = *i*'s perception of expected future changes in the utility *i* can expect to gain from *k*;

$\Delta U_{ikjt_0 \rightarrow t_n}$ = *i*'s perception of expected future changes in the utility *j* can expect to gain from *k*;

t_0 = the time at which *i* is estimating the expected utility;

$t_0 \rightarrow t_n$ = the time period for which *i* estimates expected changes in the utility;

$\sum_{l=1}^5 E(U_i)_{kl1}$ = *i*'s overall expected utility from a multilateral war with *j* assuming that *i* perceives all third parties *kl* (where *l* includes third parties of types 1 to 5 as mentioned above) as potentially supporting *i*;

$\sum_{l=1}^5 E(U_i)_{kl2}$ = *i*'s overall expected utility from a multilateral war with *j* assuming that *i* perceives all third parties *kl* (where *l* includes third parties of types 1 to 5 as mentioned above) as potentially supporting *j*.

To sum up, equation 2 indicates *i*'s evaluation of the utility anticipated to be derived by each third party *k* from *i*'s victory or defeat as well as the probability of *i*'s failure with *k*'s support. It also represents *i*'s calculation of the value anticipated if *k* joins *i*. Equation 3 indicates *i*'s evaluation of the utility anticipated to be derived by each third party *k* from *j*'s success or failure as well as the probability of *i*'s success even if *i* supports *j*. It also represents *i*'s calculation of the value anticipated if *k* joins *j*. Consequently, *i*'s calculation of its net expected value from the assisting decisions of all third parties *k* equals (De Mesquita, 1981):

$$\sum_{l=1}^5 E(U_i)_{kl} = \sum_{l=1}^5 E(U_i)_{kl1} - \sum_{l=1}^5 E(U_i)_{kl2}$$

[Equation 4]

Thus, the expectation of support or hostility is dependent on *k*'s relative utility for *i* and *j*. If the expected utility of *k* for *i* is above zero, *i* supposes that *k* would tend

to aid i rather than j . Conversely, if the expected utility is below zero, i supposes that k would tend to aid j rather than i . If the expected utility is zero, k is expected to be neutral. However, even if the contemplated expected utility of k for i is negative, this does not mean i will not initiate war. Rather, i will rationally go to war if the expected utility of a bilateral war is positive and still greater than the contemplated expected utility of k for i (De Mesquita, 1981).

Taking all the equations together, i 's total expected utility in initiating a war against j under the condition of no uncertainty was defined by De Mesquita (1981) as the following equation:

$$E(U_i) = E(U_i)_b + \sum_{l=1}^5 E(U_i)_{k_l}$$

[Equation 5]

This equation shows the total gains and losses i expects for starting a war against j , where the overall anticipated value of the war is determined by the relative capabilities in the bilateral war and dependent on the tendency of third parties' involvement in the war. However, the latter is neither necessary nor adequate as a basis for i to determine the benefits from the war against j , while the former is also not sufficient as a decisive factor to determine i 's projection, although it is essential. Hence, according to the equation, three scenarios are possible for i in war: 1) fighting against its opponent on its own; 2) fighting with the support of third parties; 3) fighting in the face of opposition

from third parties (De Mesquita, 1981). By combining all equations, i can estimate whether the initiation of war is likely to return gains or losses. Hence, the expected utility decision rules for i , the war initiator, are as follows:

1. If $E(U_i) > 0$, the war is expected to provide benefits; initiating war therefore is rational.
2. If $E(U_i) < 0$, the war is expected to cause losses; initiating war therefore is irrational.
3. If $E(U_i) = 0$, i is indifferent insofar as the material estimate is concerned.

Although the expected utility model of war initiation is a precise tool for analysing and predicting war through the deductive axiomatic modus operandi, the model is not flawless and has limitations. The expected utility of war initiation, for example, merely indicates if minimal essential conditions have been met. The scientific nature of the model is also an important limitation in that it does not allow the model to illuminate the rich details and composition of incidents. For this reason, the expected utility model of war initiation only aims at scientifically 'explaining' the war-threatening conflict, not insightfully 'understanding' the mind of decision-makers. Finally, and importantly, the application of the model is integrative. Therefore, it can be complementary to other qualitative methods applied in conducting research. In other words, it can serve as a missing link in qualitative research.

RESEARCH METHODS AND PROCEDURES

Even though the application of the expected utility model of war initiation is mathematically complex, the method used in this paper was simple. The research employed the data management utility software EUGene (Expected Utility Generation and Data Management Program) developed by Bennett and Stam (2000) that allows the computation of the expected utility value.

According to Bennett and Stam (2000, p.182), EUGene aims to “[serve] as a tool to facilitate and simplify the process of merging and creating data sets in international relations, especially data sets created with the directed dyad-year as the unit of analysis.” EUGene also “serve[s] as a computational tool for the creation of expected utility data to apply the so-called expected utility theory of war across time and space [...] by directly operationalizing key utility and probability concepts” (Bennett & Stam, 2000, p.189). EUGene therefore enables users to:

1. construct data sets with different units of analysis;
2. choose variables for inclusion in final data sets from a variety of input sources;
3. easily select subsets of data based on common criteria;
4. make clear the variety of critical but often unstated assumptions about the construction of key dependent variables and the inclusion of problematic cases that go into the construction of

international relations data sets, and force users to make informed decisions about these items;

5. facilitate replication by providing a single programme for data set creation that will produce the same results for all users.

In addition, the software is free and available for download at <http://www.eugenesoftware.org/>.

EUGene allows users to designate the variables to be contained. The software consists of more than 60 variables from substantial international relations data sets. For example, the data sets of the Correlates of War Project (COW), such as the COW Militarized Interstate Dispute data (COW MID), and the expected utility’s computation based on the methods of *The War Trap* (De Mesquita, 1981), equation 5 in this article, are part of the data bank (Bennett & Stam, 2000). Further details concerning the variables can be found in the documentation section of the software’s website.

Using EUGene for the case study, a directed dyad-year data set was created, specifying Thailand and Cambodia as a dyad and the period of 1953 to 1962 as a specified range. Thailand and Cambodia were labelled country 1 and country 2 respectively. Apart from prerequisite variables automatically selected by the software, the needed variables were specified as follows:

1. The expected utility scores (tau-based) were selected to compute the values of the expected utility of war initiation

for each directed dyad-year. The computation follows equation 5, that is, the generating scores are the total of the bilateral and multilateral expected utility elements.

2. COW MID was selected as the population of cases to provide the output data set because COW is widely recognised by scholars as the most comprehensive database on war.

It should be noted that there is no third party actor intervening in the dyadic conflict; therefore, more advanced techniques for assessing intricate conditions were not applied.

After generating the expected utility scores and associated data, the data were interpreted using the expected utility decision rules to determine whether Thailand's decisions to initiate war-threatening conflicts against Cambodia between 1953 and 1962 were rational, regardless of other elements in the decision-making. The results for Thailand, the war initiator, were compared with the historical evidence, primarily diplomatic history, to explain the behaviour of the Thai state during the years of conflict, as being especially counter-intuitive or seemingly anomalous.

RESULTS

To examine the expected utility scores of Thailand in initiating a war-threatening conflict with Cambodia from 1953 to 1962, the researcher followed the aforementioned methods and procedures. Table 1 shows the results: Thailand's expected utilities in a war

against Cambodia throughout the specified time are all above zero.

In 1953, when Thailand started occupying the Preah Vihear temple, its expected utility was 0.439814, which increased to 3.149374 the following year. The hostility level created by Thailand was the use of force, with the occupation of territory being the highest action, while the hostility level of Cambodia's response, in contrast, was no militarised action. In 1958 and 1959, the expected utilities of Thailand and Cambodia were 3.208554 and 3.191159 respectively. The hostility level reached by Thailand, the initiator, was a display of force and being on alert as the highest action. For Cambodia, the hostility level in response to Thai belligerence was war. In 1961, the conflict continued and Thailand and Cambodia's hostility levels were both demonstrations of force. For Thailand, its expected utility dropped to 2.13669 and being on alert was the highest action it performed. Lastly, in 1962 Thailand's expected utility was 2.469712 when it again initiated a war-threatening conflict with Cambodia. This time, the hostility level it reached was the use of force and the highest action was clash. The hostility level of Cambodia's reaction likewise was the use of force.

Hence, the results suggest that Thailand's aggression against Cambodia in the period from 1953 until 1962 was perfectly rational in accordance with the expected utility decision rules.

TABLE 1
Thailand's Expected Utility Scores for Initiating a War Against Cambodia

year	euwtT1v2a	cwongob	cwinitc	cwhost1d	cwhost2e	cwkeynumf	cwhiact1g
1953	0.439814	0	1	4	1	1225	14
1954	3.149374	1	0	4	1	1225	14
1955	3.218512	0	0	0	0	0	0
1956	3.217309	0	0	0	0	0	0
1957	3.21497	0	0	0	0	0	0
1958	3.208554	0	1	3	4	1226	8
1959	3.191159	1	0	3	4	1226	8
1960	2.24023	0	0	0	0	0	0
1961	2.13669	0	0	3	3	1227	8
1962	2.469712	0	1	4	4	1228	17

NOTE: Variable names and descriptions are as follows:

- a. euwtT1v2 is an expected utility, Thailand vs. Cambodia, by War Trap methods (Tau).
- b. cwongob is an MID that was ongoing at the beginning of the respective year, based on 'dyadisation' of the COW MID data set to 1992, and dyadic MID data from v3.0 from 1992+ (0 = no, 1 = yes).
- c. cwinit is MID Initiation: Thailand initiated an MID with Cambodia in this year (0 = no, 1 = yes).
- d. cwhost1 is the relevant hostility level reached by Thailand in an MID with Cambodia in the respective year (0 = No hostility [no MID], 1 = No militarised action, 2 = Threat to use force, 3 = Display of force, 4 = Use of Force, 5 = War).
- e. cwhost2 is the relevant hostility level reached by Cambodia in an MID with Thailand in the respective year (0 to 5, as in hostlev1).
- f. cwkeynum is the number of the MID for which all other MID variables are reported in dyad-year data (0 = No MID, 1225 = Occupation of Preah Vihear Temple, 1226 = Preah Vihear Temple dispute I, 1227 = Preah Vihear Temple dispute II, 1228 = Preah Vihear Temple dispute III).
- g. cwhiact1 is the highest action by Thailand in dispute (0 = No militarised action, 1 = Threat to use force, 2 = Threat to blockade, 3 = Threat to occupy territory, 4 = Threat to declare war, 5 = Threat to use CBR weapons, 6 = Threat to join war, 7 = Show of force, 8 = Alert, 9 = Nuclear alert, 10 = Mobilisation, 11 = Fortify border, 12 = Border violation, 13 = Blockade, 14 = Occupation of territory, 15 = Seizure, 16 = Attack, 17 = Clash, 18 = Declaration of war, 19 = Use of CBR weapons, 20 = Begin interstate war, 21 = Join interstate war).

ANALYSIS

Thailand's belligerent actions against Cambodia between 1953 and 1962 examined in this paper support the second hypothesis. As the results have shown, all political decisions by Thailand's decision-makers, Phibun and Sarit, initiating war-threatening

conflicts with Cambodia had expected utilities of more than zero under a risk-taking condition: that is, both men knew of the possibility of positive outcomes. Favourable upshots expected by Thai leaders are neither unrealistic nor irrational. This expectation was derived from the fact

that Thailand in the 1950s was a loyal ally of the United States and also a spearhead in the Southeast Asia Treaty Organisation, an anti-communist military alliance led by Washington. As a US ally, Thailand's small border conflicts with its neighbour were not supposed to be of much interest to the great powers, not only the US but also the Soviet Union and the People's Republic of China. Hence, military intervention by outside powers was unlikely, if not impossible. In addition, even without support from the US, Thailand's military power was much stronger than Cambodia's; therefore, Thailand could afford to invade Cambodia on its own in order to fulfil its demands. As a result of strategic calculations which were almost flawlessly reasonable, Thailand did not hesitate to use force against Cambodia in the period from 1953 to 1962.

Because Thailand's strategic calculations for war initiation against Cambodia were rational, as this study proved, Thai leaders, to some extent, were not well aware of any negative outcomes. Thailand's overwhelming confidence was exemplified by its agreement to present the case at the International Court of Justice (ICJ). As Nuechterlein (1965, p.250) commented, "So sure were Thai leaders that their case would be upheld that they did not seriously consider the possibility that the court might rule against Thailand. This is partly owing to the fact that, as a major ally of the US in Southeast Asia, Thailand expected the verdict of the ICJ to be trivial in practice, if not in favour of Thailand. Therefore, when the court on

June 15, 1962, ruled in favour of Cambodia and the Thai government was faced with the obligation to surrender the disputed land to Cambodia. [...] [T]he situation was [...] distasteful and humiliating for Thailand." Thailand under Field Marshall Sarit was shocked and irritated by the verdict. Rather than complying with the judgment, Thailand reinforced its presence around the vicinity of the Preah Vihear temple. In addition, the plausibility of war was also discussed in Bangkok. However, under pressure from Washington and other western powers, Thailand eventually, but reluctantly, relinquished the temple and withdrew its troop from Cambodian soil (Bunyavejchewin, 2013).

The question then arises: what went wrong in Thai political decisions? The decisions, as the analysis shows, were entirely rational. This includes even the decision to reinforce the Thai troops' presence in the disputed area after the ICJ delivered its verdict. I argue that there was nothing wrong with Thailand's political decisions to initiate war against Cambodia even when it did violate the verdict of the court. Nevertheless, what was at fault was Thailand's anticipation of the US' possible political reactions in response to a war between Thailand and Cambodia. Even though Thailand was the US' major ally in Southeast Asia, a US decision to support, or even to ignore, Thailand's belligerence against Cambodia could lead to a catastrophes, including a direct confrontation with Communist great powers. In particular, the expected utility of

several possible scenarios was seemingly hazardous for the US because unlike Thailand, the US had to face uncertainty in a situation possibly leading to a war trap.

For Washington, turning a blind eye on Bangkok's increasing presence on the Preah Vihear temple issue was like giving the green light to Thailand's hostility toward Phnom Penh; such hostility bore the possibility of a full-scale war. This derived from the fact that Thailand shared a number of war-prone state attributes, for example, the regime characteristics and the capabilities. Regarding the former, a high degree of government centralisation was more likely to create a war participant (Geller & Singer, 1998, pp. 52-56). In addition, where hardliners dominate leadership, there is a greater tendency of stepping into war (Vasquez, 1993, p.155). This trait was evident in Thailand from 1953 to 1962, during which two military dictators, Phibun and Sarit, ruled the country with absolute centralised power in their hands. This is particularly true in the case of Sarit as Saritocracy "developed into an explicit personalist and direct dictatorship without any aura of constitutional foundation" (Chambers, 2013, p.159).

Concerning the latter attribute of war-prone states, national capabilities, especially military might, have strong and consistent relationship with the frequency of war as well as war initiation. A high level of militarisation or military spending, especially, has a positive correlation with foreign conflict (Geller & Singer, 1998, pp.56-60). During the pro-American

and anti-communism period in Thailand between 1953 and 1962, the volume of US military assistance to Bangkok had increased significantly; in May 1962, 6,800 American troops were even temporarily stationed in Thailand to assist the right-wing regime in South Vietnam (Chambers, 2013, p.65). With the increasing militarisation and the absolutist power in the hands of the junta, there was a greater tendency for Bangkok under Sarit to initiate war against Cambodia under the postulation that Washington would ignore, if not assist, its action.

As the analysis has demonstrated, it is not an exaggeration to say that Bangkok had a chance to win the war, even if going into it alone. If Bangkok had chosen to go to war after the delivery of the verdict, either with or without Washington's support, its decision would have been reasonable according to the expected utility theory of war initiation. However, this postulation would have dragged Washington into direct militarised conflict that might have pushed Washington to face the worst-case scenario: a confrontation between Washington and the two Communist giants, namely, Beijing and Moscow (Bunyavejchewin, 2013, p.23). Thus, allowing war between Bangkok and Phnom Penh to occur would have been an unnecessary risk for policy-makers in Washington to take. According to an American diplomat, Washington in fact "hoped to improve relations with Cambodia [...] while continuing to support Thailand and South Vietnam as allies not against Cambodia but against the Communists" (Bunyavejchewin, 2013, p.23).

In short, notwithstanding its flawed anticipation of the US reaction, Thailand's political decisions to initiate war-threatening conflict with Cambodia between 1953 and 1962, as proven scientifically by this study, were rational in accordance with the expected utility decision rules. It is true that the Thai decision-makers failed to read Washington's regional strategic calculus, especially the collation of costs and benefits based on the probable scenarios, correctly and accurately. Nevertheless, Bangkok's misleading expectation of Washington's response does not equate with the irrational decision of Thai dictatorship. For this reason, the outcome supports the first hypothesis of the research that the nationalist and dictatorial nature of Thai regimes did not make Thailand's foreign policy irrational.

CONCLUSION

This paper started with the question whether Thailand's decisions made by two military dictators, Field Marshal Phibun Songkhram and Field Marshall Sarit Thanarat, to initiate war-threatening conflict with Cambodia from 1953 to 1962 were rational based on a scientific study of international conflict and war. The paper adopted the expected utility theory of war initiation to examine the decisions of both military juntas always accused of being arbitrary, nationalist and foolish. In other words, their decisions were assumed to be irrational.

Using the data management utility programme EUGene to calculate the expected utility value, the paper showed how the expected utility theory of war

initiation can offer a counter-intuitive explanation of foreign policy behaviour of Third World states, particularly states ruled by authoritarian leaders. As the case of Thailand's aggression against Cambodia in the 1950s and the early 1960s suggests, counter-intuitive actions, such as war initiation, are not necessarily irrational as long as the probability of gain is greater than loss.

The expected utility theory of war initiation, nevertheless, is not flawless. It does have limitations. By excessively focusing on the material or military capabilities, for example, the expected utility theory can downgrade the roles of other variables and disregard normative variables that are not empirically quantifiable.

In conclusion, despite its limitations, this paper argues that the expected utility theory of war initiation can contribute significantly to research on conflict and war in general, and particularly on war-threatening conflict in the Third World. The theory offers a scientific explanation grounded on a scientific methodology rarely used by the existing literature mostly dominated by historical research. Lastly, but most importantly, if there is any implication suggested by the finding of this research, it is to remind that it is important to reconsider the foreign policy of those we call insane, from Kim Jong-un's North Korea to Bashar al-Assad's Syria and Vladimir Putin's Russia. Their decisions to initiate conflict that could lead to war, looked at from a different perspective, may not be insane at all.

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From “Freedom from” towards “Freedom to”: A Frommian Reading of Anthony Burgess’s *A Clockwork Orange*

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ABSTRACT

Throughout history, mankind’s ideal to pursue what he reveres as freedom has proved unattainable since insurmountable obstacles have always impeded the path to freedom. Individual freedom has constantly been restricted by external forces, in most cases an authority that forces humans into submission and bondage in a way they find themselves not only physically but also spiritually constrained by these shackles. In some instances, the magnitude of the authoritative force is so considerable that the individual surrenders his freedom and abandons any hopes of liberation. One of the theorists who highly values individual freedom is the German social psychologist Erich Seligman Fromm (1900-1980). He asserts in his book *Escape from Freedom* (1941) that achieving freedom has been a prime goal for mankind throughout time. He maintains that as an individual unshackles himself from the restrictions of an authority, he tries to compensate for the lack of security which stems from his rejection of that authority and thus submits himself to another source of authority or becomes an authoritative figure himself. This paper aims to analyse Fromm’s concept of freedom in Anthony Burgess’s *A Clockwork Orange* (1962). Through the application of Fromm’s theories, this article attempts to show that freedom is not merely a release from external forces but a release from internal constraints as well, stressing the fact that spiritual freedom is the real path to happiness and internal satisfaction and that positive freedom is from within and not without.

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INTRODUCTION

Due to its great significance in people's lives, freedom has always been regarded as a central and controversial topic for critics and theorists, and is discussed in a whole gamut of areas such as philosophy, sociology, psychology, and politics. Throughout time, theorists have tried to define this elusive concept and set boundaries regarding the domain of individual freedom. One of the most famed of these critics was Sigmund Freud (1856-1939), who expressed his deep concern regarding individual freedom and happiness in his book *Civilization and its Discontents* (1930). He maintained that "the liberty of individual is no gift of civilization. It was greatest before there was any civilization" (Freud, 1962, p.42). Despite Freud's scathing critique of civilisation and its prohibitions, his pessimism did not allow for reconciliation between mankind's yearning for freedom and civilisation's requirements for obedience and conformity. Freud's pessimism turned into extreme radicalism with Herbert Marcuse (1898-1979), who in his *Eros and Civilization: A Philosophical Inquiry into Freud* (1955), reformulated Freud's ideas and assumed a revolutionary stance against all the manifestations of the authorities. However, as Freud's pessimism, Marcuse's "Great Refusal" of all institutions could not provide mankind with a satisfactory solution that could lead him towards liberation and happiness.

A humanistic philosopher and a democratic socialist, Erich Fromm also attempted at offering a viable solution

to the un-free and desperate individual. Addressing modern man's struggle to transcend the boundaries in order to regain his lost freedom, Fromm asserted that the path to freedom can be facilitated only when individuals discard their pseudo-mechanical selves and provide room for the growth of their real selves. He affirmed that by communicating and cooperating with others, man can find a safe haven in which he realises his capabilities and potentialities and is able to expand and improve them. In the sections that follow, this paper will address Fromm's theory of freedom and its application to Anthony Burgess's *A Clockwork Orange* (1962).

THEORISING ERICH FROMM'S CONCEPT OF FREEDOM

"The whole life of the individual is nothing but the process of giving life to himself; indeed we should be fully born, when we die- although it is the tragic fate of most to die before they are born" (Fromm, 1955, p.32).

A social psychologist and psychoanalyst, Fromm discussed his ideas regarding individual freedom and the means to achieve such vital goals in almost all his works. He contended that despite all the achievements and great advances in science and industry, the modern man was desperately unhappy and un-free; "the great promise of unlimited progress- the promise of domination of nature, of material abundance, of the

greatest happiness for the greatest number, of unlimited personal freedom has sustained the hopes and faith of generations since the beginning of the industrial age" (Fromm, 2012, p.1). However, the modern man became more desperate and unhappy as he assumed a domineering character, gradually removed all the obstacles on his way to freedom, and released himself from all religious, political and social restrictions.

Fromm likened the story of the modern man to the growth of a child, a process which he called "individuation." A child enjoys oneness with his mother before his birth, and for some period after his birth; he feels secure and safe in this pre-individualistic state, and shares what Fromm called "primary ties" with his mother. During this period, the child is totally dependent on his mother, and does not have an opportunity for the development of his individuality and gaining freedom. Fromm went on further and observed that "the primary ties not only connect the child with its mother, but the member of a primitive community with his clan and nature, or the medieval man with the church and his social caste" (2001, p.20). Such ties deter a person from expanding his faculties and therefore eliminate any chance of obtaining independence and freedom. As the primary ties weaken, the child finds more space for the advancement of his faculties and gains physical and emotional strength. The more the child grows and the primary ties are cut off, the more it develops a quest for freedom and independence (ibid., p.23). Nonetheless, as the child undergoes the process of

individuation and enjoys his freedom, he feels more and more alone, desperate, and anxious. He finds himself as a separate entity no longer united with his mother, feels shaken and frightened, and is doubtful about taking steps forward. Therefore, the growth of identity, individuality, and freedom is accompanied by a feeling of isolation and anxiety that can disturb mankind for the rest of his life. Losing the close contact he once had with social, religious, and political institutions which gave him security and assurance, man feels petrified and desperate in his new independent position.

Fromm introduced two types of freedom: "freedom from" and "freedom to." "Freedom from" is achieved when mankind throws off all the shackles that restrict him, namely, his primary bonds and all the external restrictions that deter his progress. This kind of freedom is a negative one since it brings about powerlessness and anxiety to the life of mankind. As Fromm stated,

Alienation as we find it in modern society is almost total... Man has created a world of man-made things as it never existed before. He has constructed a complicated social machine to administer the technical machine he built. The more powerful and gigantic the forces are which he unleashes, the more powerless he feels himself as a human being. He is owned by his creations, and has lost ownership of himself (1955, p.115).

At this point, the newly gained freedom becomes a burden, a yoke from which mankind struggles to escape. He cannot keep going with “the burden of “freedom from”” on his shoulders; he “must try to escape from freedom altogether unless he can progress from negative to positive freedom” (Fromm, 2001, p.116). In order to discard feelings of aloneness and anxiety, an individual has two paths before him. The first and the best way for a person to escape from negative freedom is to connect with the world, enjoy the feeling of love, and provide space for the flourishing of his individuality and potentialities. The other path “open to him is to fall back, to give up his freedom, and to try to overcome his aloneness by eliminating the gap that has arisen between his individual self and the world” (ibid., p.120). According to Fromm, such a retreat is not possible since “primary bonds once severed cannot be mended; once paradise is lost, man cannot return to it” (ibid., p.29). Escaping from negative freedom cannot totally relieve the person from anxiety and may even cost the individual a whole life of bondage because this course of escape, “like every escape from threatening panic, is characterized by the more or less complete surrender of individuality and the integrity of the self” (ibid., p.121).

An individual who chooses to sacrifice his individuality in order to guarantee his feeling of safety is confronted with two means of escape which Fromm termed as “mechanisms of escape.” The two mechanisms of escape through which the individual achieves a feeling of security are

“sadism” and “masochism.” Fromm called the relationship underlying both sadistic and masochistic tendencies “symbiosis”, where the individual attempts to establish a union with the world or with another self so as to make himself dependent and forget the burden of his own self (Fromm, 1955, p.36).

A person who shows masochistic tendencies struggles to escape from freedom by attaching himself to a source of power, from whom he gains strength which in turn compensates for his lack of security. Such a person tends to “abandon his individuality by submitting himself to an authority and sacrificing his happiness; the aim is to dissolve in another’s power and find pleasure and satisfaction within his surrender” (Fromm, cited in Funk, 2000, p.119). An individual who submits himself to a source of power such as an authoritative figure or a sociopolitical or religious institution in order not to feel powerless, jeopardizes his individuality and self-concept; while submitting themselves, these individuals “show a tendency to belittle themselves, to make themselves weak, and not to master things” (Fromm, 2001, p.122). This sense of insignificance helps the individual forget his feelings of loneliness and separation as an independent entity, and saves him from the shackles of negative freedom by relegating him to nothingness. As the masochist wishes for submission, the sadist covets domination. Under sadistic tendencies, the person desires to rule over others both physically and emotionally, and to see people being dependent on him; he also wishes to torture them physically and

mentally, and enjoys watching them suffer. As Fromm maintained, "One with sadistic tendencies seeks to destroy the will of another, make him a defenseless and will-less instrument of his own will, to dominate him absolutely, in extreme cases forcing him to suffer and to express the feelings induced by his suffering" (cited in Funk, 2000, p.119).

Positive freedom, which is "freedom to," is not achieved through the formation of sadomasochistic tendencies, but is realised when an insecure person establishes relationships based on love and comradeship with the world and individuals. As Fromm held, "Love is the only sane and satisfactory answer to the problem of human existence" (1995, p.104). Without finding any compensation for the feeling of insecurity, man gradually faces mental disturbances and severe neurosis, and precipitates his own destruction. Fromm contended that the lack of connection with others, both physically and emotionally, can lead to different anomalies. However, more devastating than "physical aloneness" is "moral aloneness"; being related to people emotionally, sharing their values, and revealing in their newly-gained advances, are what grant people the real sense of identity and freedom. Having no attachment to "values, symbols, and patterns" can be called "moral aloneness," and is "as intolerable as physical aloneness; or rather that physical aloneness becomes unbearable only if it implies moral aloneness" as well (Fromm, 2001, p.15). Living with love and loving ourselves and others are Fromm's solutions to mankind's unhappiness. "The

affirmation of one's own life, happiness, growth, and freedom is rooted in one's capacity to love", namely, "in care, respect, responsibility and knowledge" (Fromm, 1995, p.47). Fromm asserted that, "the aim of the art of living is to be connected with the outer and inner realities, and with one's own mental psychic, and physical powers in such a way that the love of life may grow" (cited in Funk, 2000, p.164).

DISCUSSION

Whoever insists on safety and security as primary conditions of life cannot have faith; whoever shuts himself off in a system of defense, where distance and possession are his means of security, makes himself a prisoner. To be loved, and to love, need courage, the courage to judge certain values as of ultimate concern – and to take the jump and to stake everything on these values (Fromm, 1995, pp. 98-99).

A Clockwork Orange is a political satire written in 1962, which strongly castigates the society's violent restrictive measures in depriving individuals of their free will. The story happens in the near future, where the state in which the protagonist lives takes serious measures against the widespread of youth crime so as to curb public disorder and impose order. Alex, the protagonist, is a disobedient and violent teenager who, having committed such ultra-violent acts such as assault and battery and rape, is incarcerated in the state prison.

There he undergoes inhumane treatment called the Ludovico Technique, which is an aversion therapy that removes his criminal tendencies by exposing him to violent films and music while injecting him with drugs so as to make him feel sick. The suffering and the feeling of nausea, which are accompanied by drug injection, result in Alex's incapability to do violent acts after the treatment.

Alex lives with his parents with whom he shares no love or compassion. As a teenager, who has not yet achieved his full sense of self, he still covets the love, protection and care of his family so as not to feel powerless and alone. According to Fromm, "the child remains functionally one with its mother for a considerable period after birth and to the degree to which the individual, figuratively speaking, has not yet completely severed the umbilical cord which fastens him to the outside world, he lacks freedom" (2001, p.20). Having lost his primary bonds which once gave him security, Alex is in pursuit of another source of safety in which he seeks refuge, and the first place where he must find this haven is his family. His family, however, being afraid of Alex's belligerent behaviour, has long lost hope in his improvement and left him alone. As a fifteen year-old male, Alex lives in a rundown government flat block with this family who earns pitiable wages; Em, the mother, is forced by the state to work in a store stocking canned goods while Pee, the father, works in a factory (Farrar, 2009, p.2). Being a low middle-class family, his parents work very hard to earn their living and lead their existence. Busy doing their

daily drudgery, Alex's family has no time to care for their son, assist him in tackling his problems, and help him correct his belligerent behaviour.

Alex, too, has abandoned hope of receiving love and care from his family; for him, the concept of family has long lost its sense. This lack of sympathy for the notion of family reveals itself in Alex's unfriendly act of calling his parents Pee and Em instead of father and mother. Furthermore, after Alex is released from prison, to his bewilderment, he finds out that his parents have rented his room to a lodger called Joe who has now taken the place of their son, and has left Alex homeless. Instead of helping their son learn the appropriate conduct, they replace him with someone else to rid themselves of Alex's abnormal behaviour. After undergoing the Ludovico Technique, Alex encounters his parents once more. Ashamed of his inappropriate treatment of his son, his father has now come to the realisation that he and his wife did not act as caring parents. When seeing his parents, Alex confronts them aggressively:

Well well well well well, what gives? What makes you think you are like welcome? My papa said, in a like ashamed way: You were in the papers, son. It said they had done great wrong to you. It said how the Government drove you to try and do yourself in. And it was our fault too, in a way, son. Your home's your home, when all's said and done, son (Burgess, 1986, p.163).

Though Alex's lying to his parents and his abominable treatment of them are unfair and disgusting, his parents, rather than helping him find his real self, have abandoned him without making an attempt to mend their relationship. In the *Theory and Technique of Family Therapy*, Charles P. Barnard and Ramon Garrido Corrales assert that "the members of one's family are one's significant others par excellence" (cited in Davis *et al.*, 2002: 21); that is to say, "Family must at once provide support for integration into a solid family unit as well as differentiation into relatively autonomous selves" (ibid., 21). Obviously, Alex's parents failed to provide the room for his growth and integration of self; they denied him the chance of growing up in a household with love and affection.

Having abandoned hope to receive security from his parents, Alex attempts to finding another source of security by relating himself to others based on sadistic strivings. He is in "search for some form of 'Home'" to feel secure (ibid., p.20); and he ultimately finds this home in a gang of young criminals whom he rules over. As his parents find a substitute for Alex at home, Alex too, compensates for his parents' lack of care and affection by forming his own family on the streets. Now, instead of enjoying his life in his house, he lives with his violent friends who ultimately fail him as his parents do. "'O my brothers'" - Alex's frequent salutation both to his *droogs* ("friends" in the Anglo-Russian slang, Nadsat) and to his readers- functions as the narrative trope via which he attempts to establish family

structures wherever and whenever he can" (ibid., p.28). "In addition, the repeated use of "my brother" when addressing the reader, and the many references to himself as "your humble narrator" together help establish an intimate relationship between Alex and the reader; we experience everything with Alex, and he shapes our perceptions" (McDougal, 2003: 10). While trying to regard the readers as the members of his family, Alex informs them of his sorrows and sufferings through the first person narrative. This way, the readers enter his mind, feel sympathetic towards his sense of aloneness and pity him for his desperate attempts at having a family.

Alex's feeling of insecurity leads him to form a symbiotic relationship with others based on sadism. Therefore, he turns to violence as a means to compensate for his lack of security. Throughout the story, in both explicit and implicit terms, Burgess's antihero shows his desire to rule as "a dictator over the city in which he lives" (Farrar, 2009, p.10). Reigning over his subjects relentlessly, Alex assumes the figure of a leader for his gang members and wears the mask of an authority to feel powerful and secure (surprisingly, he wears a mask of Benjamin Disraeli in the novel in order to hide his identity while doing violent acts). To feel powerful, "Alex also imposes his belief system upon the members of his gang. Mirroring the government's repressive force, Alex takes liberties in demonstrating to his *droogs* what should be considered acceptable and unacceptable behaviour within their social circle" (ibid., p.10). When disrespecting him, Alex confronts

his gang violently. As a lover of classical music, he desires his *droogs* to be so; he admonishes Dim who derides a woman singing in the Korova Milkbar. He goes even further in beating his *droogs* to death when they question his authority. Alex's desire to act authoritatively and violently is also represented in his attempt to sexually and sadistically abuse two ten year old girls, Marty and Sonietta. In his attempt to rule over others, he also leads an attack on the house of an old lady that causes her death. Davis and Womack (2002) maintain that by committing violent acts and attaching himself to a criminal group, Alex struggles to create pseudo-families in place of the family he never had. Alex's seeking sanctuary in his criminal gang, his sadistic behaviour, and ultra-violent acts are all indications of his powerlessness with which he disguises his shattered self and compensates for his lack of security, which he could never gain from his family or any other source.

Alex's lack of safety not only drives him to form sadistic relationship with others, but also eventuates in the creation of a pseudo self. He is an insecure fifteen year old, who, like many of his age, finds his sense of self precariously lost in a state of flux and moments of beguiling awkwardness. "Alex responds to these feelings of uncertainty and change by trying on different costumes, behavioural modes, and verbal mannerisms in an effort to establish what he perceives to be a stable sense of identity" (Davis *et al.*, 2002, pp.23-24). Violence accompanied by music, drugs, wearing different costumes (in order to change appearance), and the

use of the Nadsat gang language complete Alex's pursuit of safety. They are the safe haven in which he seeks sanctuary. "The drugs that Alex injects give him the means for numbing any true sense of self. Classical music provides him with both the demonic energy for committing his heinous acts and with the means for drowning out the cries of his luckless victims" (ibid., p.25). "His attraction to classical music gives him a sense of superiority over the other gang members. Alex attempts to establish music's standing as a refined and elegant art form worthy of respect by attacking Dim, who disrespects the woman singing in the Korova Milkbar" (Farrar, 2009, p.11). Even the use of the Nadsat contributes to Alex's use of violence and sadistic acts in the novel; "for the Anglo-American reader the Slavic words connote communist dictatorship, the society of *Darkness at Noon*, without moral values and hope" (Evans, 1971, p.409). Esther Petix describes "the Nadsat tongue as the language of the *droogs* and of the night; it is the jargon of rape, plunder, and murder veiled in unfamiliarity" (qtd. in Davis *et al.*, 2002, p.25).

Both the sadist and the masochist are dependent on their subjects to the extent that their subjects' disappearance results in the complete disintegration of their selves. The sadist's survival is based on the existence of the person over whom he has control, as the survival of the masochist is rooted in the existence of the master that rules over him. As Fromm held, "the sadistic person is as dependent on the submissive person as the latter is on the former; neither can live

without the other. The difference is only that the sadistic person commands, exploits, hurts, humiliates, and that the masochistic person is commanded, exploited, hurt, humiliated" (1995, p.16). As Alex needs his gang members' submission to feel powerful, they need Alex's authority. But Alex's pseudo-acts are mere facades to hide his real powerless self; all his efforts to form a symbiotic relationship in order to dominate others not only make him more insecure but deter his growth of self, and gradually bring about resentment, not friendship and love. Throughout time, Alex's gang members, Georgie, Pete, and Dim, grow tired of his demanding and overbearing behaviour which no longer gives them security, and begin to challenge his authority. They betray Alex to the police and abandon him. Alex deceives himself "into believing he has control over situation while his supposed subordinates and admirers disparage and thwart his attempts to elevate his ego" (Farrar, 2009, p.3). As Fromm maintained, "The realization of the submissive (masochistic) or the domineering (sadistic) passion never leads to satisfaction... the ultimate result of these passions is defeat ... while these passions aim at the establishment of a sense of union, they destroy the sense of integrity" (1955, p.36).

In part two, Alex is imprisoned for murder where he undergoes the Ludovico Technique. Under the Ludovico, Alex finds himself unable to satisfy his sadistic drives through violent acts and becomes powerless and insecure. After his release from prison, he returns to his parents,

desperate and insecure, only to find out that another boy has taken his place. Wandering in the town, he encounters the people whom he caused injuries and is avenged by them. He finds the home of F. Alexander, who remembers Alex as the one who raped his wife and caused her death. Being opponents of governmental policies, he and his friends use Alex as a pawn in their political battle to reveal the ugliness of the Ludovico Technique. They leave Alex in a room where he is exposed to Beethoven's ninth symphony which he was exposed to while watching violent films under the Ludovico. Being unable to stand the music as a result of conditioning, he feels sick and desperate. Finding himself lonely and insecure, with no source of safety to turn to, he attempts suicide by jumping from the window:

And like it was Fate there was another malenky booklet which had an open window on the cover, and it said: "Open the window to fresh air, fresh ideas, a new way of living." And so I knew that was like telling me to finish it all off by jumping out. One moment of pain, perhaps, and then sleep forever and ever and ever (Burgess, 1986, pp.158-159).

Alex's suicide does not simply stem from his feeling of nausea or hatred of music; the main cause of his suicide is his feelings of insecurity and powerlessness. The insecure self becomes a burden for him, so he decides to discard with this feeling of nothingness by removing the

source of dissatisfaction, which is his self. Fromm asserted that “if for any reason other persons cannot become the object of an individual’s destructiveness, his own self easily becomes the object. When this happens in a marked degree, physical illness is often the result and even suicide may be attempted” (2001, p.155). Alex, being unable to direct his sadism (which gives him power) towards others, feels desperate and attempts at the elimination of his self. As Fromm contended, “The phantasy of suicide is the last hope if all other means have not succeeded in bringing relief from the burden of aloneness” (1961, p.153).

The government authorities who are afraid of the public controversy regarding Alex’s suicide reverse the Ludovico Technique, and Alex is back to his violent life. Once again, he forms another criminal gang and commits violent acts. As time passes, however, Alex comes to the realisation that his violent way of life no longer provides him with security, satisfaction and happiness. He grows tired of violence and rejects his friend’s offer to engage in violent acts: “Look, droogies. Listen. Tonight I am somehow just not in the mood. I know not why or how it is, but there it is. You three go your own ways this nightwise, leaving me out” (Burgess, 1986, p.172).

The final chapter, which was omitted in the United States, is of great significance to Burgess’s optimistic vision of Alex’s future. In chapter twenty-one, Alex grows in maturity and finds his true identity. Encountering Pete, his old friend, who is

now married and happy, Alex envisions his future life when he has his own family and lives with love: “Tomorrow is all like sweet flowers and the turning vonny earth and the stars and the old Luna up there and your old droog Alex all on his oddy knocky seeking like a mate... And all that cal” (ibid., p.177). According to Fromm, this sense of love and comradeship is the decisive factor in rescuing individuals from their negative sense of freedom, and guiding them towards positive freedom; a get away from “freedom from” to “freedom to”. Symbiotic relationships with others (masochism and sadism) are inactive or inert relations that do not contribute to the individual’s growth of self and freedom. The only path to freedom is love; “In contrast to symbiotic unions, mature love is a union under the condition of preserving one’s integrity, one’s individuality” (Fromm, 1995, p.16). In his image of future, Alex realises that enjoying a happy life and real freedom is not possible without connecting himself to others through love. As his future plans, Alex also desires to be a music composer and hopes to find his true place within the society; for Alex, true life manifests itself when he realises his potentialities.

Burgess “likes to portray the universe as a “duoverse;” that is, a cluster of contending opposites which agitate moderation. “The thing we’re most aware of in life,” he writes, “is the division, the conflict of opposites, good, evil; black, white; rich, poor, and so on”” (cited in Firestone, 1977, p.46). Without the last chapter, there will be no reconciliation between the good and bad

of which Burgess speaks. Without Alex's hopeful vision of future, the reader still finds Alex under the rule of authority, as an un-free being. It is just in the last chapter of the novel that he finds reconciliation between his violent tendencies and the goodness inherent in his nature; "finally grown up and fully prepared to accept the difficult challenges of selfhood, Alex no longer chooses the easier road to ultra-violence, opting instead to embark upon a lifetime of familial commitment and human renewal" (Davis *et al.*, 2002, p.33). Under the Ludovico, and with the absence of his potential for evil, Alex becomes unable to grow sense of goodness and freedom, incapable of finding reconciliation between his tendencies, and becomes a creature with no sense of commitment. Agent Hillier, the protagonist of Burgess's *Tremor of Intent*, calls the people who lack any commitment to goodness or wickedness "neutrals", and concludes that "neutrals are morally inferior to evildoers" (Rabinovitz, 1979, p.46). As a result of their neutrality and lack of commitment, they cannot find the true course of their lives, and therefore cannot achieve a true sense of self. By depicting Alex's commitment to love and life, Burgess fulfilled his duty as an artist and expressed his approval of what Fromm asserted regarding the power of love and commitment. According to Burgess, "the artist is an alchemist, drawing on the inherent disorder and dissonance of the human experiences and somehow transmuting them into a dazzling display of order and harmony. Contending forces which divide

our allegiances in the real world are tamed and reconciled in the artistic creation, or at least seem to be so, and the illusion of unity is the final product of this creative process" (Firestone, 1977, p.46). When Alex gains maturity and succeeds in maintaining harmony, he also paves his way towards liberation and happiness.

CONCLUSION

While reading *A Clockwork Orange*, notions of freedom and un-freedom and happiness and unhappiness, all key concepts not only in the literature of the Sixties but also in public's mind, come to the fore. In the novel, Burgess castigated the repressive system that restricts individual freedom, and also represented a resistant body to this system who is not merely a fictitious character but representative of the author who rebels against the oppressive and authoritarian state in which he dwells. Embodying rebellion and opposition like his protagonist Alex, Burgess asserted that "I lean towards anarchy; I hate the State. I loathe and abominate that costly, crass, intolerant, inefficient, eventually tyrannical machine which seeks more and more to supplant the individual" (cited in Rabinovitz, 1979, pp.48-49). During the Second World War, his pregnant wife was attacked on the streets, resulting in a miscarriage and later her death. The incident had a devastating effect on Burgess's life and is depicted in *A Clockwork Orange*, in Burgess's representation of the character of Alexander whose wife is attacked by Alex's gangs.

While reading the novel, the fundamental yet unanswered question which occupies our mind is whether there is an escape from such oppressive systems and whether individuals can find their path to freedom despite all the obstacles. Can the negative freedom of which Fromm spoke be discarded and replaced with positive freedom? With today's oppressive governments in which the slightest disobedience is perceived as a tremendous threat and reprimanded as such, we doubt about the possibility of enjoying freedom. "Meaningful for the authorities is not the manifest act of inadaptation, but the possible revolt which has to be crashed before maturation" (Nicolau, 2012, p.303). Burgess ends his novel with a spirit of optimism with Alex envisioning a future in which he enjoys his freedom and happiness. However, the readers ponder whether Alex's sanguine vision of future is a mere mirage or is capable of realisation; whether his attempts to have free will are doomed to failure, and whether his dreams of enjoying freedom are going to become true.

These assumptions can undermine our whole faith in the existence of freedom and can throw doubts on the notion of free will too; they unveil the fact that what we regard as freedom of choice is a mere mirage, since it is the authority's will that determines our way life and normalises our behaviour. Under such circumstances, an individual lives not with his own will but with a pseudo-will. Through conditioning, Alex is transformed into a powerless being with a pseudo-will, who is unconsciously responding to the will of the authority.

Robert Kane maintains, "We believe we have free will when (a) it is 'up to us' what we choose from an array of alternative possibilities and (b) the origin or source of our choices and actions is in us and not in anyone or anything else over which we have no control" (cited in LaFisca, 2008, p.11).

Despite all the pessimism regarding the concept of freedom, achieving freedom should not be discarded as a far-fetched goal. According to Fromm, bondage can be replaced with positive freedom only when a person finds his true self in relationships with people and the world. He held that:

I believe that love is the main key to open the doors to the "growth" of man. Love and union with someone or something outside of oneself, union that allows one to put oneself into relationship with others, to feel one with others, without limiting the sense of integrity and independence. Love is a productive orientation for which it is essential that there be present at the same time: concern, responsibility, and respect for and knowledge of the object of the union (1994, p.101).

In *A Clockwork Orange*, too, Burgess expresses his concern over the meaninglessness of such notions as free will and happiness under the rule of repressive governments and rises in rebellion, as his young protagonist. By juxtaposing individual will versus the state's will and portraying his ultimate hopeful vision of

Alex's future, Burgess also places his hope not in the failure of human freedom, but in the potentiality of love to generate freedom and happiness. Authorities may remove freedom through restrictive measures such as the Ludovico Technique, but they can never remove the sense of hope in a life full of hope and love. They can restrict individuals but can never prevent them from growing a sense of internal and spiritual freedom.

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Role of Political Talk Shows in Creating Political Awareness among Pakistani Youth: A Case Study of General Elections 2013

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ABSTRACT

This paper examines the influence and role of political talk shows in generating political awareness amongst Pakistani educated youth. The researcher aims at measuring the youth's level of political awareness and involvement, and the extent to which these educated youth are persuaded by political talk shows about political affairs. The respondents involved in this study consist of the students of Government College University Faisalabad, Pakistan. The researcher selected 200 respondents from all departments of Government College University Faisalabad. The researcher applied non-probability sampling technique for data collection. Questionnaires were used as a tool for data collection. Findings showed that political talk shows influenced the youth and played a key role in providing political awareness. These findings also revealed that political talk shows have great deal of impacts on youngsters in helping them to get the knowledge about their basic social and political rights.

Keywords: Political Communication; Talk Shows; Pakistani Youth; General Elections 2013

INTRODUCTION

Electronic media play a key role in bringing change and structuring the political institutions and socialising the public on

various political aspects (Kenski & Stroud, 2006). Pakistan has an energetic media landscape, which regardless of political pressures and direct bans periodically subject to from the government, enjoy the freedom to a large extent. In 2002, Pakistani electronic media industry was liberalised and experienced a big media boom.

During his government, General Pervez Musharraf liberalised the electronic media

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sector leading to an explosion of local, privately-owned satellite television channels distributed via cable networks. The Pervez Musharraf government, which constituted the 'Pakistan Electronic Media Regulatory Authority' (PEMRA), acted as a watchdog to control this newly liberalised sector. During Musharraf's regime (2000 to 2008), 89 local satellite television channels were launched and 26 foreign channels were granted broadcast rights in the country. On the radio front, 138 FM radio licenses were granted during the same period, of which about 115 were operational by 2012. In the severe competitive circumstances, commercial interests became dominant and quality journalism gave way to socialise the masses.

After 2008, these television channels have formed the conception of political talk shows which is now being devotedly followed by Pakistani nation. These privately owned television channels have complete accessibility to rural and urban areas and for this reason, such talk shows are shaping a silent revolution in the country. The television channels have opted almost similar format for their political talk shows by inviting both ruling and opposition parties for discussing political issues. In Pakistan, several people believe that it is a good thing to set up meaningful discussions between different political personalities and which will eventually lead into a consensus on most important political matters that prevail in the country (Ahmed, 2010).

On the contrary, others argue that such political talk shows have done nothing in

creating and enhancing the political and social awareness because many years have passed since such talk shows started and we still see the same politicians are being elected. For example, Jamshed Dasti was disqualified due to his fake B.A degree and many talk show anchors criticised him, but in the subsequent elections, he got overwhelming victory. These talk shows are becoming a forum whereby participants fight and audience get worthless debate. Many people rate these talk shows as entertainment shows. The input of political entities and members of parliament in such TV shows have added to the reinvigorating effects of these debates on democracy in the country. Pitching this political dialogue to masses has helped in promoting participatory politics, revamp trust and hope in politics and develop the democratic process (Bilal *et al.*, 2009).

Thus, this study evaluates the influence of political talk shows in creating political awareness among the learned youth of the country by discussing political issues. It also measures the level of political awareness among the learned youth based on political information and involvement in general elections. Survey was used as the method to investigate the role of political talk shows and for responding to the research questions.

PROBLEM STATEMENT

Pakistan's 10th general election was held on May 11, 2013. This general election was unique in itself that every political party was focusing on youth because almost half the registered voters, or 47.5% of 84.3

million, were under the age of 35. This made Pakistan a comparatively young and energetic nation with a lot of potentials. Surprisingly, this important segment of voters was unnoticed and never focused on by neither political parties nor mass media. Looking back at the history, since the 1970's first general elections, political parties have never took youth as an important asset in elections; however, when the minimum voting age was set at 18 years in general elections, the youngsters have become the apple of all political leader's eye.

LITERATURE REVIEW

The political communication has changed in recent past and in contemporary research studies, the meanings of "Democracy" are being transformed. Media play a key role in contemporary global political affairs (Gamson, 1999). Many scholars of social sciences and communication studies are of the view that coverage of political issues by mass media can create a disparity in political affairs. Many communication scholars believe that the media, particularly TVs, are valued enough in world's political matters (Baum, 2005; Dahlgren, 2009).

Mass media provide a forum to political parties and their candidates to win the trust of their potential voters before and during elections. Yet, there is no upcoming election or political shows that can enlighten people by showing numerous perspectives on the significant political matters. Mass media can perform as a watchdog to keep an eye on public officials in guiding and preventing them from breaching the public trust (Lyangar & McGrady, 2007, 17).

Mcquail (2005) stated that even though television is mostly rated as a medium of entertainment, it can play a critical role in contemporary politics. In fact, it is considered as a major source for information and news for every person and also an important channel of communication which links politicians and their potential voters, particularly during election time. TV has normally remained trustworthy and reliable in its informally allocated role of public informer (p. 35).

A large number of political figures participate in TV talk shows to give their points of view in the discussions concerning community interests (Tolson, 2001). Since 1990s, the appearance of political entities in political talk shows has created huge interest in this genre, inciting mass communication intellectuals to study the political and social impacts of TV talk shows (Timberg, 2002).

The reputation and popularity of TV talk shows is entrenched in their capability to split socio-political borders by dealing with contentious matters and holding political figures and officials answerable to the public. TV talk shows deal with issues of common people and open new horizons that become a source of communication between the public and the leaders. Many political party leaders and their members participate in TV talk shows to give explanation about their viewpoints on numerous public issues. They also appear on such talk shows for coverage, promotion, public relations, and to enlighten the audience regarding their political agendas (Lee, 2002; Bernard & Erler, 2003).

In 2000, Pew Research Centre published a report on the information sources of American youth during election times. The report stated that 34% of respondents aged between 18 to 29 years received information about political issues from late night TV talk shows. The newspapers and television news programmes pointed out this report and showed stories and comments regarding the role of late night shows which serve as a key source of political information for America's youth (Young & Tisinger, 2006).

Robert Lloyd (2009) considers Barak Obama's participation in late night comedy talk show as extraordinary as he became the first American sitting president to appear on such shows. Lee (2002) states that the participation of such political entities and party leaders in TV shows helps to minimise the gap between common people and ruling elite. He also believes that such infotainment shows can help in diminishing the difference in political involvement among the public (Lee, 2002). For that reason, political talk shows can be rated as giving a democratising impact by providing audience unconventional alternatives to gain political knowledge.

Ross (2004) writes that TV signifies the "real public space in which politics occur and through which citizens comprehend the political process". Targeted audience and participants who telephone in such programmes distinguish the political talk shows genre as a "public sphere" where various views are expressed and alternative voices are heard.

RESEARCH OBJECTIVES

1. To analyse the influence of political talk shows in creating political awareness among the educated youth of Pakistan.
2. To measure the level of political awareness among educated youth based on political information and participation in elections.

METHODOLOGY

To study the role of Political Talk Shows in creating political awareness among Pakistani youth, the researcher used the survey method to collect the required data. Universe for this study consisted of the students of Government College University Faisalabad (Pakistan). The survey is the appropriate method for the present study because the objective of this study is to measure the level of political awareness of Pakistani youth. Therefore, researcher selected 200 respondents (100 males and 100 females) from Government College University Faisalabad, Pakistan, to measure the influence of talk shows in creating political awareness in Pakistan. Due to convenience sampling, equal input of both genders was ensured. The researcher used close-ended questionnaires to evaluate level of awareness among educated youth using the Likert scale method, whereby the value 1 signifies strong disagreement. The quantitative data collected from the survey are meant to explain the different levels of opinion and understanding of political talk shows. It is believed that the more exposure the youth have, the higher the understanding

and awareness they have about political situations in Pakistan.

RESEARCH QUESTIONS

1. Do political talk shows influence Pakistani youth in creating political awareness?
2. What is the level of political awareness among educated youth based on political information and participation in elections?

FINDINGS

The results derived from the findings and interpretation of the study are discussed in this section. The results were obtained to answer the research questions which were formulated by the researcher at the beginning of the study.

The results presented in Table 1 indicate that out of 200 respondents, 96 (48.00%) watched political talk shows on a daily

basis. Meanwhile, 64 (32.00%) watched the talk shows once in a week, and 17 (8.50%) watched them twice in a week. However, 23 (11.50%) respondents only watched such shows a few times each month, i.e. whenever they had free time. The amount of talk shows watched by both genders is immensely different, i.e. 144 (72.00%) males compared to only 56 (28.00%) females watching these talk shows. This finding shows that the females are taking less interest in watching political talk shows as compared to their male counterparts.

Table 2 indicates that 103 (51.5%), or the majority of respondents believe that political talk shows provide information to the public, whereas 60 (30.0%) respondents believe that these current affair programmes are useful forums for dialogue. Nevertheless, 12 (6.0%) respondents consider that political talk shows provide entertainment to the masses, while 25 (12.5%) rated these programmes as forum for fights.

TABLE 1
Frequency of watching Political Talk Shows

Frequency	Total	Percent	Male	Female
Daily	96	48.00	75	21
Once a week	64	32.00	48	16
Twice a week	17	8.50	9	8
A few times each month	23	11.50	12	11
Total	200	100	144	56

TABLE 2
Respondents' Opinion about Political Talk Shows

Opinion	Total	Percent	Male	Female
Informative	103	51.5	76	27
Entertaining	12	6.0	4	8
Effective platform for dialogue	60	30.0	37	23
Forum for fights	25	12.5	10	15
Total	200	100	127	73

Fig. 1 below informs the number of respondents who think political talk shows as a source of awareness regarding political matters in the country. Around 44.5 percent of the respondents agreed that political talk shows are creating awareness regarding political matters, followed by 21.5% of the respondents who strongly agreed that political talk shows are creating political awareness. However, 7.5% of the respondents stayed neutral and about 10.0% strongly disagreed with the impression that political talk shows are creating political awareness. The results also showed that most of the respondents (44.5%) believe that political talk shows are providing information, imparting knowledge and awareness regarding political issues in the country.

Fig. 2 illustrates the importance and influence of political talk shows to change the political structure. This figure shows that 40% of the respondents disagreed to the notion that political talk shows are very much significant in changing the political structure in Pakistan. Other 30% of the respondents strongly disagreed that political talk shows can play a pivotal role to change the political structure of the country because they believe that there are certain other factors involved. The political structure in Pakistan comprises election procedures, electoral colleges, political parties, election commission’s guidelines about elections, political parties and institutions like parliament and senate. During the election campaign, TV channels formulate different segments and provide plentiful time space

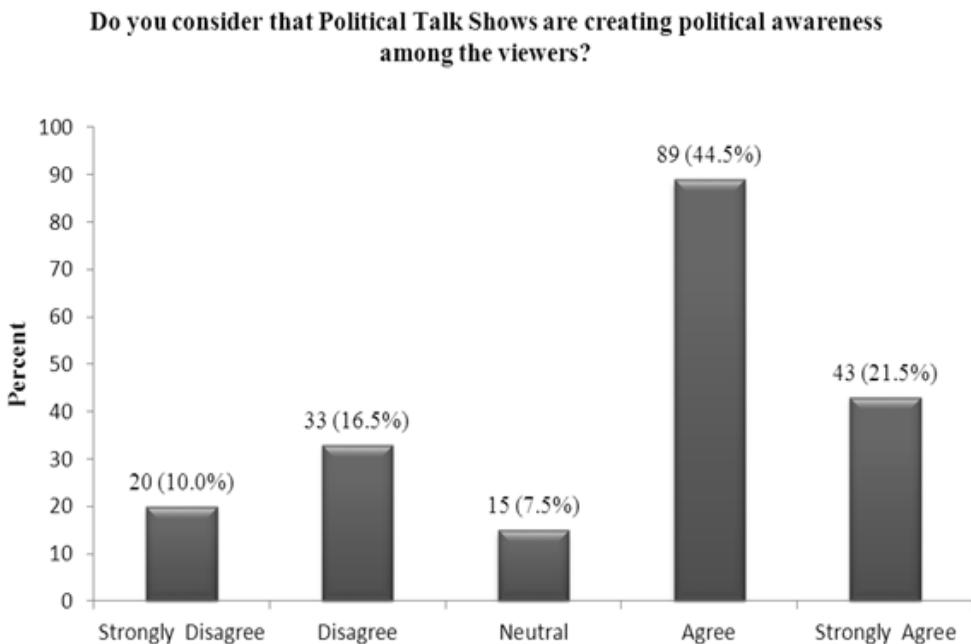


Fig.1: Respondents’ opinion concerning the significance of Political Talk Shows in creating political awareness

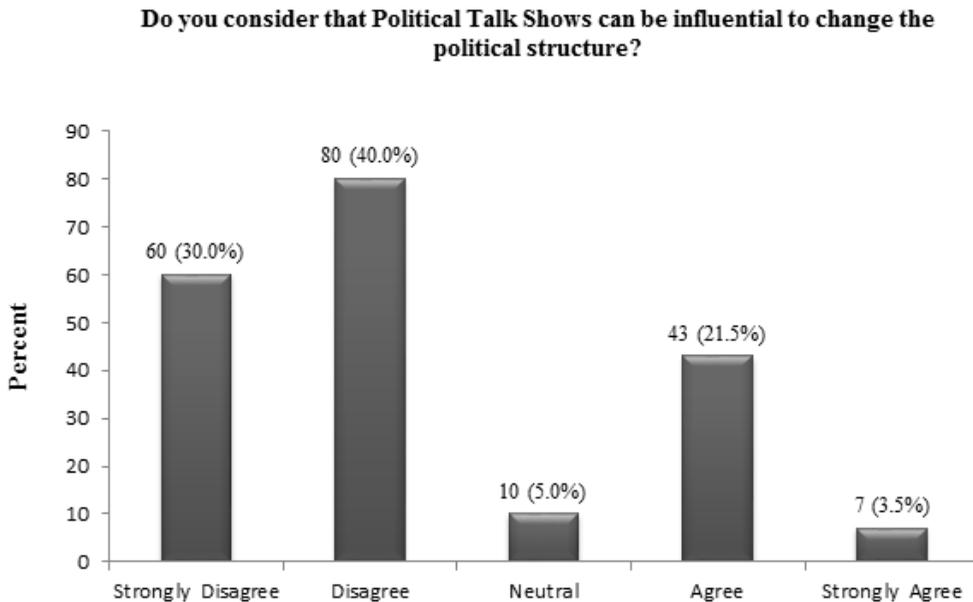


Fig.2: Respondents' opinion concerning the influence of Political Talk Shows in changing the political structure

for the upcoming elections. Almost all the channels design very attractive sets and decorate their studios as election cell and in news and talk shows discuss all the aspects of current and previous political structure to give insight to public.

Fig.3 below indicates that political talk shows are highly influential in motivating youth to connect with any political party or leader and build up their trust in them. This figure shows that 47.5 percent of the respondents agreed to the above said notion. On the contrary, 19.5 percent of respondents disagreed that political talk shows are much influential in engaging and developing trust in a particular political party or a leader. Meanwhile, around 10 percent of the respondents remained neutral with this notion. In Pakistan, the political system is bit different because the people's political

affiliations with politicians are on the basis of personality. They do not care about the manifesto of the political party whom the politician belong to.

Fig.4 below depicts the understanding of the respondents on their knowledge about their social and political rights through political talk shows. The findings revealed that majority (38.5%) of the respondents got awareness regarding their social and political rights through political talk shows, although 26.5 percent of them disagreed to this, and 14.5 remained neutral with the notion. This analysis further identified that most of the respondents are aware of their social and political rights and their "Right to Vote" is their democratic and fundamental right.

Fig.5 below indicates that political talk shows are highly influential in motivating

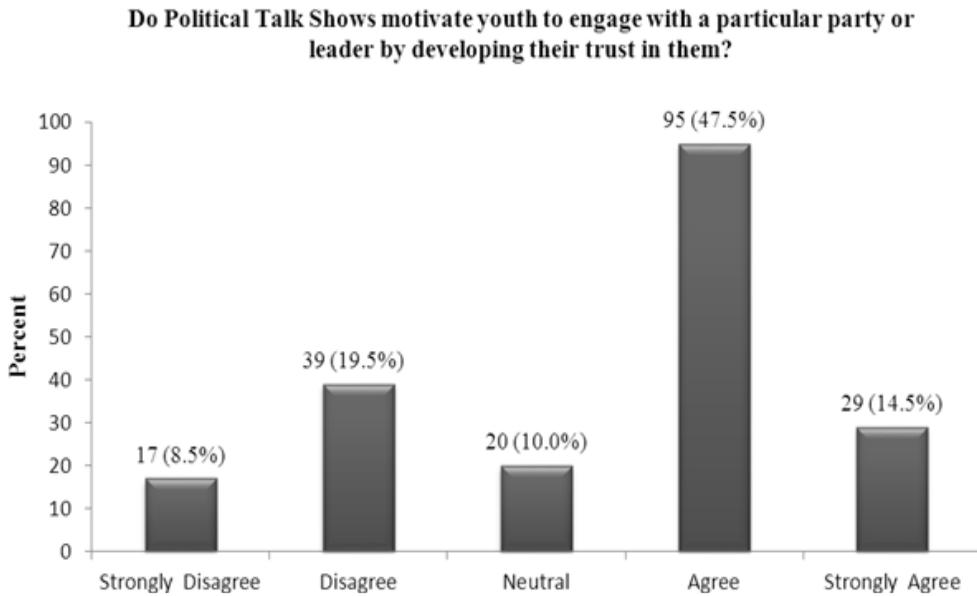


Fig.3: Political talk shows motivate youth in developing trust with any political party or leader

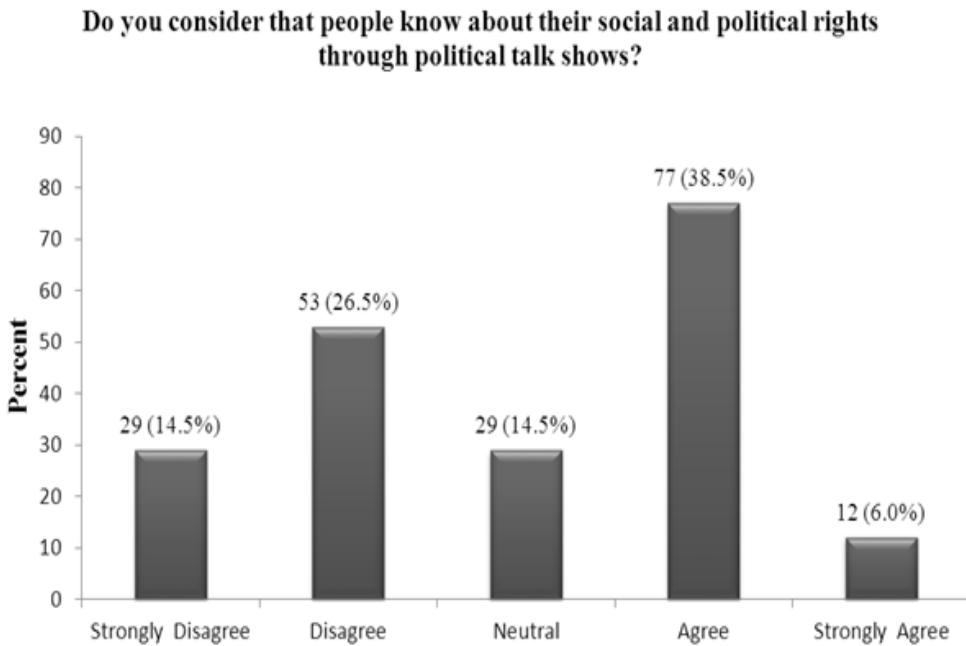


Fig.4: Respondents' view of their knowledge of social and political rights through Political Talk Shows

Do you consider that Political Talk Shows motivate people to cast their vote?

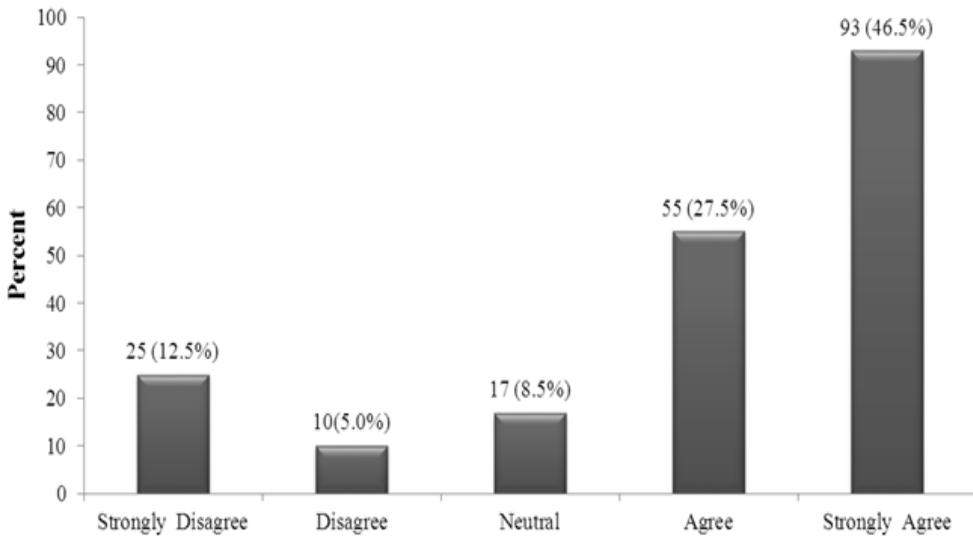


Fig.5: Political Talk Shows motivate people to cast their votes

youngsters to exercise the right to cast their vote in elections. This figure shows that 47.5 percent of the respondents agreed to the said notion. Meanwhile, 19.5 percent of the respondents disagreed that political talk shows are very much influential in engaging and developing trust in a particular political party or a leader. 10 percent respondents remained neutral with this notion. In May 2013, the people of the Islamic Republic of Pakistan went to the general elections to select a new democratic government. In defiance of efforts by the Pakistani Taliban to frighten people from the polls, more than 55% of the approximately 88 million registered voters turned out on May 2013, compared to merely 44% in the general election in 2008.

CONCLUSION

This study is an exploratory study, with the main objectives to identify whether political talk shows are influential in creating political awareness amongst educated youth, political involvement and participation in political process. Political knowledge, issue awareness and motivation to participate in political process are the most important aspects of political awareness so the findings suggested that it is not a myth but a reality that political talk shows are creating political awareness among their viewers. It was also observed from the data that the respondents who frequently watch political talk shows have a tendency to possess more knowledge and insights about their political rights which eventually help the youth to participate in the political process in Pakistan.

Political talk shows bring people closer to the political process by providing them the knowledge and understanding of political process and making them aware that they can make effective contributions by casting their votes. The voter turnout of the general election in 2013 (55%) showed that youth highly participated in political activities because most of them have taken interest in political affairs. The reason for this is that educated youth have the trust and faith in political parties and political system as well. On the contrary, the findings also revealed that political talk shows cannot change the political structure in the country. Political Talk shows have become quite popular in Pakistan. They have given rise to the awareness and although the shows have not helped much in changing the political structure of the country, it is still too early to determine their impacts on the country's political scene. Moreover, the contributions of the Talk shows on many important issues cannot be ignored. In particular, they have huge impacts in creating a noise on the scene about any issue or diverting the public's attention from any critical issue.

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Morphological Analysis as a Strategy for Thai Students' Vocabulary Development

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ABSTRACT

This study aimed to show the efficacy of morphological analysis as a vocabulary-developing strategy that enables students to decode or determine the meanings of vocabulary, to enlarge vocabulary and to retain vocabulary in long-term memory. The study was a one-group pre-test-post-test experiment and investigated the effect of morphological analysis on the vocabulary-developing ability of 40 Bangkok University students and explored their attitudes towards the use of morphological analysis. The instruments were a vocabulary test and a questionnaire exploring their attitudes toward morphological analysis. The pre-test and post-test scores of the experimental group were calculated by descriptive statistics and compared using a dependent t-test measure. It was found that the students obtained higher scores on the post-test than on the pre-test at 0.05 level of significance. In addition, their attitudes towards using morphological analysis were enthusiastic. Moreover, the results of this study suggested that using morphological analysis assisted the students in decoding the meanings of vocabulary and enlarging vocabulary, helped them to retain vocabulary in long-term memory, motivated them to learn the English language and gave them pleasure in learning vocabulary. Pedagogical implications for vocabulary learning are suggested in the conclusion.

Keywords: vocabulary building strategies, vocabulary retention techniques

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INTRODUCTION

Research and theory reveal three particularly crucial facts about English vocabulary. First, vocabulary knowledge is crucial to reading comprehension and to general success in school. Second, the task of learning vocabulary faced by students is enormous.

Third, there is substantial and increasing evidence that many poor children enter school with a vocabulary much smaller than that of their middle-class counterparts and that having a small vocabulary is a huge obstacle to success in reading. Given these facts, finding effective and efficient ways to bolster students' vocabulary is essential (Baumann & Kame'enui, 2004). As Sorbi (2010) stated, it now seems clear that vocabulary acquisition does not happen by itself to any satisfactory degree, particularly to a level that is generally needed for first-language literacy or second-language acquisition. Lexical growth must therefore be provided in language instruction. It is widely accepted that vocabulary plays an important part in language learning and should be at the centre of language teaching. Without a sufficient vocabulary, one cannot communicate effectively or express ideas. Having a limited vocabulary is also a barrier that prevents students from learning a foreign language. If students do not know how to expand their vocabulary, they gradually lose interest in learning.

What's more, Nation (2006) suggested that there are three main ways in which a learner's vocabulary increases: through being taught or deliberately learning new words, through learning new words by meeting them in context and through recognising and building new words by gaining control of roots, prefixes and suffixes. However, this study focuses on Nation's (2006) third way to increase learners' vocabulary i.e, morphological analysis.

Morphological analysis, also known as morphology analysis, morphemic analysis or word-part or word-element analysis, examines how words are constructed with roots or stems and affixes (prefixes and suffixes). It is a vocabulary-learning strategy that can resolve the aforementioned problem because morphology can contribute to expanding and elaborating learners' vocabulary knowledge. Indeed, learners who are familiar with English morphology are able to recognise more of the words that they encounter in reading passages (Sorbi, 2010). Mountain (2007) proposed that research supports the morphemic analysis of prefixes, suffixes and roots as an effective way to build vocabulary as well. In addition, using morphological analysis to help remember new words is a major vocabulary-learning strategy. This method deserves time and repeated attention because it can involve such a large proportion of English vocabulary (Nation, 2006). Mountain (2007) stated that 65% of English words are made up partly or entirely of prefixes, suffixes and roots derived from Latin and Greek. Similarly, Bromley (2007) affirmed that the meanings of 60% of multisyllabic words can be inferred by analysing morphology. Knowing the meaning of a root, prefix and suffix often gives clues to what a word means. Because much of the English language comes from Greek and Latin, we would do well to teach students the common derivatives. This is especially true for the study of science, which contains many multisyllabic terms. Knowing just a few roots makes it much easier to figure out other

words that contain these roots. For example, archeology consists of the root *archeo/archi/arch* meaning “ancient” and the suffix *logy* meaning “the science or the study of”. Therefore, archeology is the study of history from the remains of ancient buildings, tools and other objects. Another example is the word *disaster*, which is assembled with the prefix *dis-* meaning “negative” and the root *aster-* meaning “star”. Thus, disaster means that the stars were in a bad position, resulting in the occurrence of a catastrophic event. The last example is the suffix *ify-*, which indicates the function of the word as a verb and means “to make something become the thing or have the specified quality”; if students knew this, they would be able to guess the meaning of many words such as *intensify*, *magnify*, *simplify* and *rectify* that use this suffix even if they were meeting the words for the first time.

According to Mountain (2007), spending class time on frequently-used Latin roots is an exceedingly worthwhile practice because it helps students establish connections. Consider the root *mort* (meaning death). Familiarity with this root helps students determine the meanings of such words as *mortuary* (connected with death or funerals) and *mortality* (the number of deaths during a certain period of time). Nation (2006) suggested that if learners had special purposes for learning English, it would be worth investigating whether there were affixes and stems that were important in their areas of specialisation. Students of medicine, botany and zoology, for example, will find that knowing the meaning of affixes

and roots such as *itis*, *hemo* and *photo* can give them access to the many technical words in their fields that use affixes.

In the light of vocabulary teaching, teachers should instruct students to roots and affixes and lead students to realise the importance of roots and affixes. Almost 50% of English words are complex and they can be more easily understood through the study of the root and affix of each word (Chatzisavvas, 2005). Aside from teaching students about roots and affixes, teachers should encourage students to practise using roots and affixes by doing vocabulary exercises so that they can recycle vocabulary; this can lead to improved vocabulary (Thornbury, 2008). One such exercise could be the breaking of words into root, prefix and suffix to help figure out the meaning of the word (Hiebert & Kamil, 2005). Nist and Simpson (2001) also noted that many individuals believe that the knowledge of a word element can significantly increase vocabulary because learners can figure out unknown words by examining the parts of words such as their prefixes, suffixes and roots. Understanding the meanings of the root and the affix of a word is an important step in independently determining the meaning of an unknown word.

As stated by Nation (2008), and as with all vocabulary-learning strategies, morphological analysis can be used with both high- and low-frequency words. It is, of course, more suited to words that contain useful word parts. Note that word-part analysis is a rather risky way of guessing

the meanings of unknown words and is best regarded as a mnemonic trick for remembering word parts that have already been understood. Therefore, teaching roots and affixes is beneficial to students because this method gives students a strategy for decoding the meanings of unknown words. (Buddingh, 2009).

To gain an insight into morphological analysis, the various perspectives of some scholars are presented as follows:

1. Nist and Simpson (2001) noted that the most important word element is a word's root. The root is the word element from which most of the meaning is derived, and thus the root carries most of the denotative or dictionary meaning. Word elements cannot be broken down any further than a root and still carry meaning. However, two roots can be put together to form a word, such as the word *cinematography*, which is a combination of the roots *cinema* and *graph*. Additionally, a root can be combined with either a prefix or suffix, as in the case of *gynecology* (the suffix *-ology*, meaning "the study of" + the root *gyneco-*, meaning "women"). A list of common roots taken from Latin and Greek and examples of their use is shown in Table 1.

The next most important word element is the prefix. Although prefixes do not add as much information as roots do, they bring more meaning than suffixes do. Prefixes are elements added to roots at the beginning of the word. Sometimes prefixes

TABLE 1
A List of Common Roots Taken from Latin and Greek

Root	Meaning	Example
acer, acr	sharp, bitter	acerbic, acrimony
amor	love	amorous
annu, enni	year	annual, centennial
aud	hear	audio
auto	self	autocrat
bell(e)	beautiful	embellishing
bene	well, good	benefactor
bio	life	biosphere
cap	take, hold	captivate
carn	flesh	carnal
clam, claim	shout, cry	exclaim
cogn	to learn	cognitive
corp, corpo	body, flesh	corpse
cred	believe	credibility
de, div	god	deity
duc, duct	lead	conduct
ideo	one's own peculiar style	idiosyncrasies
mania	madness	egomania
mis, mit	send	mission, emits
mne	memory	mnemonic
mort	death	moribund
polis	city, state	cosmopolitan
rupt	break, burst	rupture
scrib, script	write	transcribe
spec, spect, spi	look, look at	spectacle
sym, syn	same, together	sympathy, synthesis
vit, viv	life, live	vivacious

(Chatzisavvas, K, 2003; Nist-Olejnik, S. L., & Simpson, M. L., 2001)

can be removed from the root, and the remaining elements can stand on their own and make sense. Such is the case with the

word *nonintrusive*. When the prefix *non-* is removed, what remains, *intrusive*, is a word that has meaning on its own. A list of common prefixes with examples is shown in Table 2.

TABLE 2
A List of Common Prefixes

Prefix	Meaning	Example
a	from, down, away	abolition, aberration
anti	opposing, against	anti-contraceptive
bi	two	binary
circum	around	circumvent
contra	against, opposite	contraception
de	from, down	deteriorate
dis	not, apart	disintegrate
em, en	not, into, very	embody, enhance
equi	equal, fair	equivalency
il, ir	not	illogical, irrelevant
mal, male	harmful	maladjusted
mis	wrongly, badly	mistreat
post	after	postmodernism
pseudo	false	pseudoscience
socio	social, society	sociology
sub	below, under	submerge

(Chatzisavvas, K, 2003)

The final word element is the suffix. Suffixes carry the least amount of meaning. Their primary function is either to change the part of speech, as in from *propose* to *proposition*, or to change the word to its plural form or its past tense, as in the words *complications* and *spawned*. Some suffixes, such as *logist*, which means “one who studies”, extend the meanings of word roots,

as in the case of *biologist* and *gynecologist*. A list of common suffixes is shown in Table 3.

TABLE 3
A List of Common Suffixes

Suffixes that form noun	Suffixes that form adjectives	Suffixes that form verbs
ac	able, ible	ate
cracy	ac, ic	ify
ance	al	ise
dom	ant, ent	Ish
ence	ary, ory	Suffixes that form adverbs
er, or	dom	ly
ess	en	
graph	ful	
ion, tion	ive	
ician	like	
ism	ous, ious	
ist	some	
ity	y	
ment		
meter		
ness		
ology		
scope		
sis		
tude		
ure		

(Nist-Olejnuk, S. L., & Simpson, M. L., 2001)

Nist and Simpson (2001) also proposed guidelines for using morphology as a strategy for vocabulary enrichment as follows:

- Learners should try not to memorise the definitions of prefixes or roots in isolation because attempting to learn definitions in this manner will

often cause them to know a word at the superficial level rather than at the conceptual level.

- If learners guessed the meaning of a word that contained a root or prefix, they should use the dictionary or context to verify their hunch. Sometimes word elements, such as content, communicate only a vague definition, so this extra step may be necessary and helpful to the learners in their quest to understand a word or a sentence.
2. As Kinsella *et al.* (2012) explained, morphological analysis or word analysis is very crucial to vocabulary learning because it can help students to determine the meanings of unknown words. For example, a secondary school teacher (Kinsella *et al.*, 2012) reported reading about a character who suffered from amnesia. Teaching students that the prefix *a-* derived from Greek and means “not” while the base *mne-* means “memory” revealed the meaning of the word “amnesia”. As a result, the students could make connections to various words in which the prefix *a-* changed the meaning of the base word (e.g. *apolitical*, *asymmetrical* and *atypical*). This was in line with Nation’s (2006) proposal that using morphological analysis or word analysis to help remember new words is a major vocabulary-learning strategy. This strategy deserves time and repeated attention because it can involve such a large proportion of English words. Learning and reviewing high-frequency

affixes will equip students with some basic tools for word analysis, which will be especially useful when they are prompted to apply them in rich and varied learning contexts. There are too many affixes to teach them all; however, it is important to realise that relatively few affixes account for the majority of affixed words in English. Thus, it is helpful to explicitly teach high-utility affixes (meaning and pronunciation) and to assist students in making connections as they encounter new vocabulary containing these parts. Once these basic affixes have been mastered, it can be useful to explore more complex or less frequent word parts. Additionally, focused word study that builds students’ knowledge of Greek and Latin roots and bases can be of significant assistance to students. Learners in particular are unlikely to have read enough or engaged in enough academic conversations beyond school in which key roots were clarified. Linguists estimate that over 50% of the polysyllabic words found in English texts are of Latin and Greek derivations. Consequently, students must know the significance of learning English from roots.

3. Nation (2006) observed that knowledge of affixes and roots has two values for learners of English; this knowledge can be used to help them learn unfamiliar words by relating these words to known words or to known prefixes and suffixes, and it can be used as a way of ensuring whether an unfamiliar word has been

successfully guessed from context. Moreover, Nation also suggested that learners need to know several things to make use of a word's parts:

- For receptive use, they have to be able to recognise that a complex word, such as *unhappiness*, is made up of parts and that these parts can occur in other words, such as *unpleasant*, *happily* and *sadness*. Learners also need to know what the parts mean. In addition, they have to be able to see how the meanings of stems and affixes combine to make new but related meanings. In the case of most suffixes, this is largely syntactic, but particularly with prefixes, the affix can contribute significantly to the meaning of the complex word. An important extension of this to help learning is for learners to be able to see how the meanings of the parts relate to the dictionary meaning of a new word. This then allows the parts to act as mnemonic devices for the meaning.
- For productive use, the learner needs a more detailed awareness of the formal changes to the stem and the affix that can occur when they are combined to form a complex word. These formal changes can affect pronunciation, for instance as a result of stress change such as in words like *flirt/flirtation*, *quantity/quantify* and *describe/description*. They may also affect the written form, as in words like *sacrilege/sacrilegious* and *legal/illegal*. Some changes in the written form are covered by regular spelling rules. Additionally, for productive use the

learner needs to be aware which form classes of stem words can take which affixes. For example, *-ly* can be added to adjectives but not to nouns.

4. Buddingh (2009) stated that one strategy that can be effective when teaching English is recognising and teaching cognates between the two languages. Cognates are words that are similar in structure and meaning in two languages and that have the same or similar meaning in two or more languages. Roots and affixes can be considered cognates. The study by Short and Echevarria (2005) echoed by Buddingh (2009)) showed that students who have a Latin-based native language are able to recognise English words with similar Latin derivations. The authors built a case for the need for students to learn academic language and vocabulary words. Many of these academic words are cognates, derivatives of the Romance languages, which refer to a group of related languages all derived from Vulgar Latin, which can be traced back to the era of the Roman Empire. Languages typically included in this category are French, Italian, Spanish, Portuguese and Romanian. These related languages all share a common basic vocabulary despite some phonological differences. Although English is not an official Romance language, the high instance of cognates between English and the Romance languages makes English very similar to the Romance languages. Table 4 shows

cognates relating to the Latin root word *viv*, which means life/live.

TABLE 4
Cognates Relating to the Latin Root Word “viv”

Language	Word	Meaning
English	live	live
French	vivre	live
Italian	vivere	live
Spanish	vivir	live
Portuguese	vivo	live

Roots and affixes can help students decode and decipher new words even if they are in an unknown or unfamiliar language because they sound and look similar. Although not all languages have cognates with the English language (for example, Chinese, which uses characters and different phonological pronunciation), teaching roots as cognates will be helpful for many students.

In addition to the perspectives of various scholars presented here, after reviewing the literature extensively, I found that many studies were carried out to demonstrate the three benefits of morphological analysis: enlarging vocabulary, decoding the meanings of unfamiliar words and bolstering reading comprehension (Singson *et al.*, 2000; Mochizuki & Aizawa, 2000; Carlisle & Fleming, 2003; Ku & Anderson, 2003; Buddingh, 2009).

In Thailand, Thai students have difficulty figuring out and retaining the plethora of unfamiliar words found in their textbooks and examinations. This problem likely derives from the fact that Thai students like to study vocabulary using

word lists and always immediately look up difficult words in a dictionary to find their meanings, which interrupts their reading comprehension (Jenpattarakul, 2012). As a result, their grades, especially in reading, tend to be very bad. Hence, to overcome major vocabulary pitfalls, students should be taught vocabulary-learning strategies that will assist them in determining, analysing and comprehending unfamiliar English words.

Because morphological analysis is one of several vocabulary-learning strategies and it is advantageous to students' vocabulary development, this research aimed to find out how morphological analysis affected students' vocabulary-developing ability by comparing their abilities before and after being taught morphological analysis.

PURPOSES OF THE STUDY

This study set the following as its purposes:

1. To compare students' vocabulary-developing abilities before and after being given explicit instruction in morphological analysis.
2. To survey the students' attitudes towards using morphological analysis.

RESEARCH QUESTIONS

To accomplish this investigation, the following research questions were formulated:

1. To what extent did the students improve their vocabulary-developing ability after being given explicit instruction in morphological analysis?

2. How did the students respond to the use of morphological analysis?

carnivore, benevolent, credulous, mortuary, post-mortem, corpulence, malformation, circumscribe, asymmetrical, annuity, deify, vivacity, clamorous and malefactor.

MATERIALS AND METHODS

The following is a discussion of the materials and methods used in this study:

1. This research used a one-group pre-test-post-test design. The data were collected from 40 students enrolled in an intermediate English course in the first semester of the 2012 academic year at Bangkok University. The participants were selected by purposive sampling. Among the participants, 20 were males and the other 20 students were females. The ages of the participants ranged from 18 to 20 years old.
2. Two instruments were employed in the study:
 - a. Vocabulary pre-test and post-test

To boost the internal validity of the study by ensuring vocabulary pre-test and post-test, three criteria were used to screen the target words on the vocabulary test.

Twenty words were selected from the Collins COBUILD English Dictionary (2006) to ensure that these words were intriguing and able to make the students realise the importance of morphological analysis as a vocabulary-developing strategy. Furthermore, the components of selected words included roots, prefixes or suffixes so that students could practice assembling, disassembling and reassembling word parts. The target words were *amnesia, disruption, metropolis, pseudonym, seduction, conspicuous,*

To minimise the students' familiarity with the selected words, vocabulary familiarity tests were given to them before they took the vocabulary pre-test to ensure that none of the students knew the meanings of the target words. The vocabulary familiarity test was constructed by Paribakht and Welsche (1997) and consisted of 5 levels as follows:

Level 1: I do not remember having seen this word before.

Level 2: I have seen this word before, but I do not know what it means.

Level 3: I have seen this word before, and I think it means _____ (synonym or translation).

Level 4: I know this word. It means _____ (synonym or translation).

Level 5: I can use this word in a sentence, for example, _____.

To ensure the validity of the vocabulary test by calculating the Item-Objective Congruence (IOC) index, the test was given to two experts at the Language Institute of Bangkok University to examine and rate each item so that the content met the objectives of the study. The Item-Objective Congruence (IOC) or the content validity of the vocabulary test was calculated by assigning scores to three types of answers: congruent = 1, uncertain = 0, incongruent =

-1. The Item-Objective Congruence (IOC) of vocabulary test is .96 which is acceptable. In this study, a vocabulary pre-test and post-test contained 20 targeted words designed to assess the students' vocabulary developing abilities as follows:

- to remember the meanings of roots, prefixes and suffixes.
- to identify a variety of forms of the roots, prefixes and suffixes.
- to decode the meanings of words through morphological analysis.
- to assemble, disassemble and reassemble roots, prefixes and suffixes.

The pre-test and post-test shared the same 20 targeted words, but they had different format (activities and exercises were different) so that the exposure of the words in the pre-test would not help students to remember vocabulary in the post-test.

The format of the pre-test included matching roots, prefixes and suffixes with their meanings, disassembling word parts, choosing the right definitions for words by using morphological analysis and filling in the blank (see Appendix A). In contrast, the format of the post-test included completing the sentences with words having similar roots, choosing the right targeted words and guessing the word meanings in a paragraph by applying morphological analysis (see Appendix B).

For the pre-test, students used the technique of memorising word lists to do the test whereas students had to adopt morphological analysis to complete the

post-test. This treatment procedure was to demonstrate if a morphological analysis outweighed memorising word lists and if morphological analysis could assist students in developing vocabulary.

- b. Questionnaire surveying the students' attitudes towards using morphological analysis

The data obtained from the vocabulary pre-test and post-test and the questionnaire were analysed quantitatively through dependent t-test and descriptive statistics.

The treatment procedure was as follows.

Week 1: The teacher evaluated whether the students had prior knowledge of the 20 target words by having them take the vocabulary familiarity test and recorded the results in Table 5. After that, the teacher taught the students the 20 new words, and the students were asked to write down the meanings in either Thai or English. The teacher suggested that they learn new words by rote (memorising vocabulary lists). At the end of the period, the teacher informed the students that a vocabulary test would be administered the following week (Week 2).

Week 2: The teacher had the students take a vocabulary pre-test. The test required the students to complete several exercises and activities using word lists that had been memorised. The vocabulary items were the words that the students had been taught in Week 1. The students completed the test within 30 minutes. The teacher

corrected and recorded the pre-test scores as shown in Table 6. After that, the teacher introduced the students to morphological analysis, one of several vocabulary-developing strategies. The teacher explained to the students the meaning and types of morphology and its benefits for enlarging vocabulary, decoding meanings and retaining vocabulary in long-term memory. In addition to the 20 targeted words, the teacher provided a lot of word examples that were comprised of roots and affixes, and gave opportunity for students to participate in morphology instruction and application. Finally, the teacher explained the morphological analysis of each selected word to the students.

TABLE 5
The Result of the Students' Familiarity with 20 Target Words

Level	Statements	Percentage of response (n=40)
1	I don't remember having seen this word before.	90%
2	I have seen this word before, but I don't know what it means.	10%
3	I have seen this word before, and I think it means _____(synonym or translation)	0%
4	I know this word. It means _____(synonym or translation)	0%
5	I can use this word in a sentence e.g. _____	0%

Week 3: The students were asked to take the post-test, of which the format differed from that of the pre-test administered in Week 2. They had 30 minutes to complete the test. The test was aimed at evaluating the students' memory of the meanings of the 20 words they had memorised by using the morphological analysis taught in Week 2. The teacher corrected the tests and recorded the post-test scores as shown in Table 6.

Table 5 revealed that most students had no prior knowledge of these words: 90% chose Level 1 and 10% chose Level 2, but no one chose Levels 3–5.

As shown in Table 6, the results of the vocabulary test indicated that all the students obtained higher scores on the post-test completed in Week 3 than

TABLE 6
Pre-test and Post-test Scores

Student No.	Pre-test (20 scores)	Post-test (20 scores)
1.	6	14
2.	8	15
3.	10	13
4.	2	17
5.	4	14
6.	6	14
7.	7	15
8.	8	16
9.	7	17
10.	6	13
11.	7	16
12.	10	18
13.	9	12
14.	6	12
15.	3	10
16.	5	10
17.	8	12

TABLE 6 (Cont.)

18.	9	13
19.	4	14
20.	3	11
21.	5	14
22.	3	9
23.	5	12
24.	7	16
25.	6	13
26.	8	14
27.	8	16
28.	6	9
29.	4	11
30.	3	12
31.	7	16
32.	11	17
33.	6	12
34.	12	16
35.	4	10
36.	5	10
37.	6	12
38.	7	11
39.	2	9
40.	3	8
	= 6.15	= 13.07

they did on the pre-test. This means that morphological analysis favourably affected the students' vocabulary-developing ability.

RESULTS AND DISCUSSION

Research question 1: To what extent did the students improve their vocabulary developing ability after being given explicit instruction in morphological analysis? Table 7 gives the results that answered the first research question concerning the student's vocabulary-developing ability.

TABLE 7

Mean of the Pre-test and Post-test of the Students

	N	\bar{X}	S.D.	t	p
Pre-test	40	6.150	2.445		
Post-test	40	13.075	2.625	-18.408	<0.01

The results shown in Table 7 indicated that the mean of the post-test was higher than that of the pre-test based on a paired-sample test. The result from the t-test revealed that there was a significant difference between the pre-test and post-test scores. The findings supported the notion that morphological analysis can improve students' vocabulary-developing abilities.

Research question 2: How did the students respond to the use of morphological analysis? Table 8 gives the results that answered the second research question.

Table 8 shows that the students' attitudes toward morphological analysis were positive; 90% of the students expressed that morphological analysis was interesting and challenging in vocabulary learning, helped them to connect their prior knowledge of known words or known affixes with new words they were learning, made them have fun and feel relaxed when studying English vocabulary and finally, encouraged them to learn new vocabulary words. In addition, 80% of the students identified that morphological analysis had helped them to determine the meanings of the unknown words and had enabled them to store and recall vocabulary words more easily and retain their vocabulary in long-term memory.

TABLE 8
Results of the Students' Attitudes Towards Using Morphological Analysis

Statements regarding students' attitudes towards using morphological analysis	Response	Total number of students (n=40)	
		No. of students	Percentage
1. Morphological analysis is interesting and challenging in vocabulary learning.	Yes	37	92
	No	3	8
	Not sure	0	0
2. Morphological analysis helps me determine the meaning of the unknown words.	Yes	33	82
	No	7	18
	Not sure	0	0
3. Morphological analysis helps me to connect my prior knowledge of known words or known affixes with new words I am learning.	Yes	36	90
	No	2	5
	Not sure	2	5
4. Morphological analysis acts as a mnemonic device for the word meaning because it helps me to store, recall vocabulary more easily and retain my vocabulary in long-term memory.	Yes	34	85
	No	2	5
	Not sure	4	10
5. I have fun and feel relaxed when studying English vocabulary through morphological analysis.	Yes	37	92
	No	0	0
	Not sure	3	8
6. Morphological analysis encourages me to learn new vocabulary words.	Yes	37	92
	No	3	8
	Not sure	0	0

CONCLUSION

The research findings indicated that morphological analysis considerably contributed to the improvement of students' vocabulary-developing ability, which is consistent with Nist and Simpson's (2001) proposal that knowledge of roots and affixes would build students' vocabulary. When used along with other context and dictionary strategies, roots and affixes can be helpful in that students' knowledge of one root can help them determine the meaning of more than one unfamiliar word. The results were also in line with those of Mochizuki and

Aizawa (2000), supporting their notion that affix knowledge correlated with vocabulary size. Furthermore, numerous studies have endorsed that morphological analysis can influence learners' vocabulary enrichment (Mountain, 2007; Nilsens, 2006 cited in Mountain, 2007; Nation, 2006; Nist & Simpson, 2001; Chatzisavvas, 2005). In addition, the students participating in this study regarded morphological analysis as a mnemonic device for word meanings, which is supported by Jenpattarakul (2012), who noted that mnemonic devices could help students store and recall vocabulary more

easily and retain vocabulary in their long-term memory; thus, by using morphological analysis, they gained optimistic attitudes and increased confidence in learning vocabulary.

As in the study by Bromley (2007), the students in this study agreed that morphological analysis could assist them in storing new information by linking it to their existing schema or networks of organised information. As a result, there is a better chance that new words will be remembered later. In this regard, Nation (2006) also confirmed that affixes and roots helped in the learning of unfamiliar words by relating new words to known words or to known prefixes and suffixes. The burden of learning new words would be light if the words consisted of known parts, that is, affixes and stems that were already known from the first language or from other second-language words.

Apart from the benefits of morphological analysis in developing vocabulary, the findings also revealed that the students' attitude towards learning vocabulary through morphological analysis was positive and they were enthusiastic, as seen in the following statements they expressed: (1) *Morphological analysis is interesting and challenging in vocabulary learning.* (2) *I have fun and feel relaxed when studying English vocabulary through morphological analysis* and (3) *Morphological analysis encourages me to learn new vocabulary words.*

The students' attitude asserted that they enjoyed learning vocabulary through morphological analysis because they felt

that practising morphological analysis had been a matter of trial and error. In fact, they practised assembling, disassembling and reassembling word parts which they found interesting and fun. For example, during the treatment procedure, the students had to select the prefixes (*im-*, *un-*, *mis-*, *dis-*, *ir-*, *il-*, and *ig-*) to add to the word "logical"; they tried several times to add a correct prefix until they were exposed to lots of correct examples and taught the rule that prefix *il-* is used to add to words that begin with the letter "l" to form words with the opposite meaning, such as *legal*, *literate*, and *legitimate* etc. Regarding enjoyment and enthusiasm to learn, they expressed that they had fun as well as felt relaxed and encouraged when they used morphological analysis, and they could share their sense of the excitement and fascination with words composed of roots and affixes. This suggested that it is worthwhile teaching vocabulary through morphological analysis because vocabulary learning will be fruitful if students have more intrinsic motivation (enthusiasm to learn) but have less classroom anxiety. The outcome is in accordance with Moni *et al.* (2012) who stated that affective variables, such as attitude, motivation, anxiety and belief about foreign language learning have also been considered as factors that might influence foreign language learning.

To make use of the findings of this research, I recommend that:

1. Apart from morphological analysis, teachers should encourage students to integrate other vocabulary-learning

- strategies and use them interchangeably because there is no single strategy that is considered the best strategy. Nist and Simpson (2001) expressed that learning words is not a cure-all. It is simply another piece of the puzzle that, together with context and the dictionary, supplies one more option for understanding words. Therefore, teaching other vocabulary-learning strategies such as guessing word meanings from context and training students to optimise the advantages of a dictionary, should be integrated into teachers' lesson plans.
2. Teachers must ensure that students understand how morphological analysis works. Hence, educating students to be able to disassemble words into parts and reassemble the meaningful parts of words is a must (Mountain, 2007). For example, the word *explication* is assembled with the prefix *ex-* meaning "out of and away from", the root *plic-* meaning "to fold or to twist", and the suffix *-ation* indicating that this word is a noun. Therefore, *ex+plic+ation* (*explication*) means "the unfolding and opening of something", or "explaining something clearly". Another example is the word *morphology*, which is comprised of the root *morph-* meaning "shape, form and structure" and the suffix *-ology* or *-logy* meaning "science or study of". Thus, *morph+ology* (*morphology*) means "the study of form, part or structure". In this study, *morphology* refers to the study of word parts i.e. roots, prefixes and suffixes.
 3. Teachers should teach students roots and affixes and make them realise the importance of roots and affixes because almost 50% of English words are complex, and these words can be more easily understood through the study of the roots and affixes of each word (Chatzisavvas, 2005). Similarly, Greek and Latin roots can lead to familiarity with thousands of related words (Mountain, 2007). Aside from teaching, teachers should encourage students to practise using roots and affixes in vocabulary exercises so they may reuse vocabulary, which can lead to improved vocabulary-developing abilities (Thornbury, 2008); in addition, the effort of learning word parts will be repaid by the chance to meet and make use of them (Nation, 2006). However, according to Nation (2006), to optimise the teaching of roots and affixes for vocabulary learning, teachers should be able to (1) decide which affixes their students should know, (2) test to see if the students know them and (3) design a range of activities to help the students learn the affixes. Additionally, teachers should explain to students that there are a large number of roots and affixes, but some are much more useful than others. When giving attention to roots and affixes, teachers should consider the frequency of use of the word or affix to ensure that learning and teaching efforts are well repaid by many opportunities for use.

4. According to the experts' constructive comments and concerns, there are a few limitations which should be improved for further research and be the basis for teachers or practitioners to appropriately take this study's findings into account for their specific teaching circumstances. The limitations are discussed below.
 - a. Pre-test and post-test use the same set of 20 words. This can trigger *testing* or *practice effect* (the exposure of vocabulary in the pre-test will help students to remember the vocabulary in the post-test), and the data obtained might not be valid or reliable. As a result, as suggested by the experts, the strong claim that morphological analysis can improve the students' vocabulary-developing abilities in this study should be moderated. Furthermore, to prevent the *testing* or *practice effect*, the post-test should include a new set of 20 unseen words and a variety of types of question to distract the students from the correct answer such as true/false, multiple choices, matching, filling in the blank etc. The criterion for selecting a new set of 20 unseen words is the components of these words must include roots, prefixes or suffixes so that students can assemble, disassemble and reassemble word parts to show vocabulary improvement as a result of morphological analysis skill and not the *testing* or *practice effect*. With the employment of a new set of 20 unseen words and a variety of types of question, if the post-test's scores are higher than those of the pre-test, the results can be reasonably attributed to the benefit of morphological analysis to help students to decode and enlarge their vocabulary.
 - b. With regard to the treatment procedure, as pre-test and post-test used the same set of 20 words and the interval between the pre-test and the post-test was only one week (the pre-test was administered in Week 2, and the post-test was administered in Week 3), the students could recall the words in the pre-test to help them do the post-test. Thus, I cannot conclude that morphological analysis can help the students' with word retention. The possible solution is that the second post-test consisting of a new set of 20 unseen words and a variety of types of question (delayed post-test) should be administered three months, if possible, after the first post-test (immediate post-test) is completed. However, the teacher should not inform the students beforehand that there will be a second post-test in order to prevent them from deliberately memorising vocabulary in the first post-test. If the second post-test's scores are the same as or higher than those of the first post-test, we could possibly conclude that morphological analysis can help students analyse new words and remember them.

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APPENDIX A

Vocabulary Pre-test

Part I: Match the following roots, prefixes, and suffixes with their definitions.
(worth 5 points)

- | | | |
|-------|-----------------------|----------------|
| _____ | 1. mort (root) | a. harmful |
| _____ | 2. circum (prefix) | b. body |
| _____ | 3. mal, male (prefix) | c. cause to be |
| _____ | 4. corp, corpo (root) | d. death |
| _____ | 5. ify (suffix) | e. around |

Part II: Each word below contains roots, prefixes and suffixes. Write its root, prefix or suffix; then write the meaning of each word. (worth 10 points)

Word	Root	Prefix	Suffix	Meaning
1. asymmetrical				
2. malefactor				
3. credulous				
4. pseudonym				
5. circumscribe				
6. mortuary				
7. seduction				
8. metropolis				
9. deify				
10. vivacity				

Part III: Choose one of the four possible answers for each word (worth 5 points)

1. post-mortem
 - a. happening after someone's death
 - b. connecting with time after a baby is born
 - c. examining of a dead body to discover why the person died
 - d. changing an event, action etc. to a later time or date

2. carnivore
 - a. a human who eats flesh
 - b. an animal that eats flesh
 - c. an animal that eats human's flesh
 - d. human eating human's flesh

3. metropolis

- a. an important priest in the Orthodox
- b. an underground railway system
- c. a small city where less people work and live
- d. a principle city or a capital of a country

4. annuity

- a. an insurance policy giving a fixed some of money each year
- b. a contract which is declared invalid
- c. an event happening once every year
- d. a period of one year

5. malefactor

- a. a tumor or disease in a state which can cause death
- b. a failure to work a machine properly
- c. someone who has done something immoral
- d. an intention to honor people or their reputations

APPENDIX B
Vocabulary Post-test

Part I: Complete each sentence by using morphological analysis (worth 5 points)

1. She would like to pay for her music lesson, but she does not have enough money. Fortunately, her _____ uncle promises to give her money.

- a. benediction
- b. beneficiary
- c. beneficial
- d. benevolent

2. He was very embarrassed because he can't walk steadily due to the bone _____.

- a. maladroit
- b. malformation
- c. malfeasance
- d. malignancy

3. When Peter was dead from a heart attack in a hospital, his dead body will be temporarily kept at _____.

- a. mortician
- b. mortality
- c. moratorium
- d. mortuary

4. I am going to retire next year, and I want to know how much the _____ of my life insurance is.

- a. annals
- b. centennial
- c. annual
- d. annuity

5. She is a _____ woman because she loses a lot of money due to the quack doctor.

- a. accredit
- b. credentials
- c. discredit
- d. credulous

Part II: Complete each sentence with word from the list below (worth 10 points)

amnesia, disruptive, metropolis, pseudonym, seduction, conspicuous, carnivore, benevolent, credulous, mortuary, post-mortem, corpulence, malformation, circumscribe, asymmetrical, annuity, deify, vivacity, clamorous, malefactor

1. The crowded and _____ concert hall was filled with Chinese, Italian and Japanese teenagers.
2. Tom has to take care of her mother who suffers from _____. She always forget and may lose her memory.
3. Even today the Chinese in Thailand always _____ their ancestors during the Chinese New Year.
4. An immoral lawyer can save many _____ from going to jail.
5. Kate is lively, exciting and attractive; consequently, many like her because she has _____.
6. The _____ examination showed that Tom and her daughter had been murdered.
7. Bangkok is one of the most multicultural _____ of Southeast Asia.
8. Normally, people's eyes and faces are _____.
9. She caught everyone's attention because she wore _____ dress.
10. The law was rapidly passed to _____ the power of the ad hoc committee.

Part III: Applying the knowledge of morphology to answer each question (worth 5 points)

1. Knowing that the word part means hear, and that *ible-* means "able to", what does *audible* mean?
 - a. very quiet
 - b. loud enough to be heard
 - c. difficult to hear
2. Use your knowledge of roots, prefixes and suffixes to determine the meaning of the word *pseudonym*.

It was one of the publishing world's biggest secrets: Robert Galbraith, the so-called retired military policeman-turned-author of the suspense detective novel hit, "The Cuckoo's Calling," was a *pseudonym* for none other than JK Rowling

(Source: m.csmonitor.com)

- a. pseudonym probably means false name.
- b. pseudonym probably means concealment of the identity of someone.
- c. pseudonym probably means name which the writer uses instead of his or her real name.

3. Use contextual clues and your knowledge of roots, prefixes and suffixes to determine the word *carnivore*.

Lions are carnivores; they require up to 7 kilograms (15lbs) of meat per day. A major component of their diet is the flesh of large animals like the African buffalo.

(Source: <http://en.m.wikipedia>)

- a. carnivore probably means a human that eats flesh.
- b. carnivore probably means an animal that eats an animal's flesh.
- c. carnivore probably means an animal that eats human's flesh.

4. Use your knowledge of roots, prefixes, and suffixes to determine the meaning of the word "*amnesia*" as used in the following passage.

There are two main types of amnesia: anterograde amnesia (where the ability to memorize new things is impaired or lost because data does not transfer successfully from the conscious short-term memory into permanent long-term memory); and retrograde amnesia (where a person's pre-existing memories are lost to conscious recollection, beyond an ordinary degree of forgetfulness, even though they may be able to memorize new things that occur after the onset of amnesia).

(Source: http://www.human-memory.net/disorders_amnesia.html)

What is the most likely definition of the word "*amnesia*"?

- a. being memorable
- b. being able to remember correctly
- c. being able not to remember anything due to an illness

5. Use your knowledge of roots, prefixes, and suffixes to determine the meaning of the word "disruption" as used in the following passage.

Pilots at Lufthansa will hold a three-day strike next week in a row over retirement conditions, their union said on Friday, bringing more disruption to travelers after a spate of industrial action at Germany airports. The pilots' strike, which will run from 2200 GMT on April 1 until 2159 GMT on April 4, is likely to cause the cancellation of hundreds of flights, and will be the third strike to hit Frankfurt airport, Europe's third-largest hub and Lufthansa's home base, in six weeks.

(Source: <http://www.reuters.com/article/2014/03/28/us-germany-strike-idUSBREA2R16Q20140328>)

- a. ruining or destroying morally.
- b. throwing out lava, ash, and steam.
- c. preventing something from continuing or operating in a normal way.

Functions of Malaysian Condolences Written in Text Messages

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ABSTRACT

This paper argues that proper construction of condolence messages can help to mitigate misunderstandings and prevent good intentions from being misinterpreted. It also aims to illustrate how Malaysian SMS condolences are composed, i.e. what semantic functions do they fall under. Data comprised 36 authentic condolences written in English via SMS by local friends to a local Chinese female recipient. These were then analysed for the core messages and the semantic functions they fall under. The theory of framing was used as the construct to enable the recipient to reframe her mind as she recalled her feelings when she received those condolence messages. The intention was to distinguish the least and most preferred functions. Analysis suggests that Malaysian SMS condolences are composed of eight semantic functions. Those which expressed concerns via directives and wishful thinking were least preferred whilst those which eulogised the deceased and expressed uncertainty were most preferred. This finding implies that the art of writing a condolence may be an essential skill that needs to be honed as even good intentions may be misunderstood.

Keywords: Condolence, directives, Malaysian, preferred, communication

INTRODUCTION

A death in a family is a difficult moment for the bereaved who tends to experience various forms of emotion ranging from sadness,

grieve, pains, regrets, confusion, denial, pretence to momentary insanity. It is during such a vulnerable occasion that comfort and care are crucial for easing the pain and grieve experienced by the bereaved. Most people are uncertain of the right behaviour to adopt in such contexts (Yahya, 2010; Farnia, 2011; Al-Shboul & Marlyna, 2013). Often, people become awkward because of

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their lack of knowledge; they may not know what to say, or how to express their feelings and sympathy to the family concerned. In certain contexts, silence may overwhelm when death is mentioned. In other contexts, a conversation may resume as if nothing has happened (see Moghaddam, 2012). This uncertainty is likely to affect our lives in some ways because displaying the right behaviour in support of an individual's bereavement is part and parcel of social etiquette and politeness. In order to appear civil, cultured and respectful, we need to learn how to express our condolences appropriately (Zunin & Zunin, 1991; Yahya, 2010; Moghaddam, 2012) since saying the right thing can help to maintain harmony and mitigate misunderstandings.

Every culture has its own way of conveying sympathies during a bereavement. In the western culture, English speakers express their heartfelt feelings by saying "I am sorry (most sorry/deeply sorry) to hear of your loss" (see Zunin & Zunin 1991; Moghaddam, 2012; Al-Shboul & Marlyna, 2013), whereas in the Chinese culture, there is no specific word one can use in order to convey sympathy (http://www.ehow.com/about_6596409_chinese-grieving-etiquette.html). In one local observation, some Chinese visitors attending a wake had directly "consoled" the bereaved with utterances such as "*ren dou yi jing si le, ning bu yao zai nan guo le, hao hao de huo xia qi ba*" which when translated mean, "death has already come upon you, don't be sad anymore, resume life as best you can". In another instance, a bereaved was

advised by a Chinese relative, "Don't cry anymore, it is his time to go". Although these utterances may be practical, they seem less sympathetic. It is possible that they were uttered as a result of the speaker's personality or belief.

This paper takes the view that communication is a two-way process; one writes and the other interprets what is written (see Devito, 2008). In constructing a condolence, which can be a difficult task (Burchill, 2013), the writer needs to take into consideration the vulnerability of the situation (see Moghaddam, 2012). It is the writer's intention to express care and concern for the bereaved and the writer takes special care to express only appropriate and meaningful words so as to avoid any offence to the recipient (Moghaddam, 2012). The writer's message is meant to express care, love and hope with the view that the recipient would be able to find some solace in the words expressed. Thus, there is this unspoken dynamic of a writer hoping to provide comfort to a bereaved who, in his/her own way, would also expect to be comforted in such vulnerable moments (see Elwood, 2004; Farnia, 2011).

Aims

This paper aims to understand how Malaysian SMS condolence messages are constructed, i.e. what semantic functions do they fall under. It also aims to understand which of the functions unravelled are least preferred or most preferred by the recipient. This paper argues that proper construction of condolence messages can help to mitigate

misunderstandings and prevent good intentions from being misinterpreted.

WHAT ARE CONDOLENCES?

A condolence is written for the purpose of expressing sympathy on the occasion of a death. According to *The Condolences Letter* (n.d.), the skill of writing a condolence is an art and it has to be learnt. The website also claims that a condolence needs to be crafted well and skilfully so that the writer can be perceived as “behaving” appropriately (Zunin & Zunin, 1991; Moghaddam, 2012; Burchill, 2013). A condolence is a personal and private expression of care and concern, hence, the choice of words is important. However, what has been prescribed in literature as appropriate has been referring to the western concept of writing a condolence, i.e. in English. Thus far, the internet does not offer books or links which could advise Malaysians on how to write a condolence in Malay, Chinese or Tamil, and much less in Malaysian English. From this perspective, it is thus deduced that Malaysians may not have or have fewer access to mastering the art of writing appropriate condolences when the need arises.

A few websites, including those of Miller-Wilson (2006-2014) and Burchill (2013), have alluded that composing what to say is difficult but a condolence made up of graceful words is a priceless gift to a recipient during difficult times. This has been verified by the Bible (see Psalm and Proverbs). Appropriate use of words can convey solace, comfort, ease, and provide strength to the bereaved.

Rules of Etiquette

Zunin and Zunin (1991), as pioneers advocating the art of writing condolences, mentioned that a condolence message need not be profound or overly spiritual. Constructing a meaningful message is difficult but the writers suggest that a good condolence message should contain a personal element, is sincere and heartfelt, is written in the sender’s voice, i.e. as if speaking to the recipient, is short and thoughtful, mentions a fond or funny memory of the deceased, respects religious beliefs, never offer financial help, never mention money owed to you by deceased, and offers to help in other ways. According to the writers, a condolence may be structured in the mnemonic of COMFORT:

1. Comments on the loss and refer to the deceased by name.
2. Offers your sympathy.
3. Mentions one or two special qualities of the deceased (eulogise).
4. Finds a favourite memory of the person.
5. Offers to help or provide companionship.
6. Reminds the bereaved of the special qualities, strengths and character of the deceased.
7. Thoughtfully closes with some final comforting words.

Speech acts and functions of speech

The notion of speech act was derived from Austin’s (1962) work which looks at how utterances articulated by the speaker can be used to perform specific functions.

Austin (1962) says that speakers articulate particular utterances within a certain context because they expect the hearer to perform a particular task. In the word, “Go”, for example, the hearer is expected to perform the act of vacating the space where the hearer is. Austin’s (1962) work, in line with the discipline of pragmatics, says that these speech acts can be analysed on three levels:

1. locutionary act which looks at the performance of an utterance; the actual utterance and its ostensible meaning (comprising phonetic, phatic and rhetic acts corresponding to the verbal, syntactic and semantic aspects of any meaningful utterances),
2. illocutionary act which looks at the pragmatic or illocutionary force of the utterance, i.e. its intended significance as a socially valid verbal action, and
3. perlocutionary act which is about the utterance’s actual effect such as persuading, convincing, scaring, enlightening, inspiring or otherwise getting someone to do or realise something, whether it is intended or not.

Most works on speech acts usually focus on the second level of Austin’s recommendation for analysis, i.e. illocutionary acts. Searle (1969), however, claims that the basic unit of language carries no meaning in itself unless it is articulated within a situation and involves a speaker and a hearer. Therefore, when an utterance such as “open the door” is articulated in a situation where a snake is crawling into a room, the

hearer who is in the same room, is expected to perform the act of “opening the door” so that the snake can crawl out of the room. Searle (1975) says that locutionary act refers to the words, while illocutionary act refers to the performance while perlocutionary refers to the effect of the acts. In addition, Searle (1975) says that utterances operate on two types of speech acts: 1) utterance acts which encompass something said or when a sound is made and which may not have any meaning, and 2) propositional acts where a particular reference is made. He proposes that acts can sometimes serve as utterances. Hence, a perlocutionary act is the same as a perlocutionary utterance. Searle’s (1975) proposition focusses on five illocutionary/perlocutionary points which encompass *Assertives* (statements judged as true or false), *Directives* (statements attempting to make others fit into the proposition), *Commissives* (statements which make others commit to a course of action), *Expressives* (statements which express the sincere condition of the act) and *Declaratives* (statements which attempt to change the world by declaring that it is changed).

Wittgenstein (1953), a philosopher, says that the meaning of language depends on its actual use rather than its inherent meaning. From this perspective, a message that is conveyed may be interpreted by the receiver based on the context. Thus, interpretation not only depends on the situation and the participants involved but also on the psychological mood of the participants concerned.

PREVIOUS STUDIES ON CONDOLENCES

Studies focussing on condolences are rare and it began with Elwood (2004) who compared the expression of condolences between Americans and Japanese participants. The former wrote in English and the latter in Japanese. Discourse Completion Task (DCT) was used to elicit data and her participants were asked to “express” themselves in two given situations. Her data were analysed according to semantic formulas (see Olshtain & Cohen, 1983). Her analysis confirmed five patterns, which include:

1. Acknowledgement of the death with interjections like “oh” or “oh my God”.
2. Expression of sympathy like “I’m so sorry”.
3. Offer of assistance like “is there anything I can do?”
4. Future-oriented remarks which took the form of words of encouragement or practical advice, like “try not to get depressed”.
5. Expression of concern which relates to showing care for the well-being of the speaker and/or his or her family and includes questions like “How are you doing?”

Elwood (2004) found that some responses could not fit into any special category. These include “expression of empathy”, “sharing similar experience”, “statement of not knowing”, “statement of lacking words”, “positive statements”,

“expression of surprise”, “related questions” and “related comments”. Nonetheless, no examples or reasons were provided by Elwood (2004) as justifications.

Other studies that followed include Yahya’s (2010) which looked at the Iraqi community’s expression of condolences. Using an ethnographic approach, Yahya (2010) investigated the effects of cultural norms and values of condolences imposed on the Iraqi community. Spoken articulations and responses of unmentioned number of people who were possibly all females were extracted from family and friends. Data were manually recorded. Yahya (2010) then concluded that there were five most common and basic patterns of responses and five minor categories listed as:

1. Acknowledgement of death,
2. Expressions of sympathy,
3. Offer of assistance,
4. Future-oriented remarks,
5. Expressions of concern,
6. Sharing similar experience,
7. Making statements of not knowing,
8. Making statements of lacking words,
9. Expressing surprise, and
10. Making related questions and comments.

In another simulated study, Lotfollahi and Eslami-Rasekh (2011) used DCT tasks to extract data from 40 male and 40 female Iranian students. In this study, the variables of gender, age and social distance were considered. Their study revealed eight categories that encompassed:

1. Acknowledgement of the death which includes interjections such as “oh”, “oh no”, “oh my God”, “oh dear”.
 2. Expression of sympathy such as “I’m really sorry”, “a great sorrow”.
 3. Offer of assistance which covers utterances like “if there is anything I can do please let me know”.
 4. Future-oriented remarks like “you should be strong enough to cope with the situation”.
 5. Expression of concern with questions about the well-being of the bereaved for example “are you OK now?”
 6. Seeking absolution from God which include expressions such as “may God bless him” and other religious expressions which do not have exact equivalents in English such as asking God to let his soul rest in peace.
 7. Related questions which include questions posed about the person such as “how old was he?”
 8. Religious-oriented sympathy such as “we will all die”.
2. Apologetic
 - Apologetic + offer to help (I’m so sorry. If you need help, I’ll be there.)
 - Apologetic + philosophical utterance (I’m sorry, I hope it’ll be the last tragedy on your life.)
 - Apologetic + appreciation of the dead (I’m sorry, she was so nice.)
 - Apologetic + religious (I’m sorry, May God bless him!)
 3. Religious (God bless him!)
 4. Offering help (If you need any help, let me know .You can count on me anytime.)
 5. Consoling/comforting/sympathizing (Be calm and don’t worry.)
 6. Enquiring (What happened?)
 7. Silence

Another Iranian study conducted by Samavarchi and Allami (2012) also employed DCT as tasks, where 10 male and 35 female Iranians were recruited. Their results were grouped into the following categories:

1. Direct condolence; for example, “I give you my condolences.”

Looking at Arab native speakers, Tareq (2013) focussed on 85 email condolences which were directed at a Hebrew native speaker colleague who had lost his daughter. Tareq (2013) found that the strategies used were almost similar to those of previous studies (see Olshtain & Cohen 1983; Elwood, 2004; Yahya, 2010). Tareq’s (2013) categories included “acknowledgement of death”, “expression of sympathy”, “offer of assistance”, “future-oriented remarks”, “expression of concern”, “appreciation of the dead” (Eulogy), and “direct condolence”. Tareq (2013) concluded that Arab lecturers

used more “religious expressions” and that females initiated more condolence utterances than males.

All these studies had applied Elwood’s (2004) semantic functions as a model. Their findings revealed five common categories encompassing: a) Acknowledgement of death, b) Expressions of sympathy, c) Offer of assistance, d) Future-oriented remarks, and e) Expressions of concern. These findings imply that there is a common thread among the condolences expressed by Americans, Japanese, Iraqis, Iranians and Arabs. However, as can be seen, much of the data were either extracted from simulation tasks such as the DCT or were obtained from secondary sources. Although Yahya (2010) claimed to have used an ethnographical approach, her research design was not explained in detail. In this regard, the analyses provided in the previous studies were based on perceptions which do not necessarily reflect reality. However, it is the best that a society can do in order to gauge what is approximate within that society.

In contrast, this paper is guided by authentic data which were written and expressed by real writers during a real and authentic situation. As a research area that is vulnerable, it is fair to say that acquiring authentic data in a local context is difficult. The data compiled for this paper may not be substantial but it will, nonetheless, be able to provide an analysis that can shed light on how Malaysians construct their condolence messages. The analysis will thus help to identify the functions contained in the condolences that were least preferred or

most preferred by the local recipient. These features have not been discussed in previous studies; hence they will serve as an eye opener for those interested in intercultural and cross cultural communications.

MATERIALS AND METHOD

In this study, data were retrieved with the permission of a local Malaysian Chinese female recipient who works in the education industry. During her recent bereavement, SMS messages were written by friends to express their condolences. Data were compiled then rewritten as they appeared on the mobile screen and then kept in a journal. Consent for the use of data written by the 36 writers was acquired individually through emails, letters, telephone calls and face-to-face meetings. Anonymity was assured. Data were coded under ethnicity, age and gender before they were counted for the total number of words used. The texts were then numbered line by line. Each line refers to a meaningful function such as “Just heard” or “My condolences” hence, one condolence message may contain several lines and have more than one semantic function.

The 36 SMS condolence messages were composed in a total of 985 words and written in 131 lines. The average number of words was 27.38 and the average number of lines was 3.6 both suggesting a common feature of the brevity of SMS texts. The participants were Chinese (47%), Malay (33%) and Indians (20%). Gender difference was noted as 89% female and 11% male, while their ages ranged between 19 to 65 years. All the writers were known to the recipient.

However, in this paper, no variables were considered.

Analysis of data first focussed on identifying evidence of “sympathy” (Zunin & Zunin, 1991) by locating words linked to the emotion (see Table 1). Collins English Dictionary (2006) was used as a reference to verify the meaning of words used to convey the condolence, express hope and encourage (see Table 1). Zunin and Zunin’s (1991) criteria for writing a condolence and Elwood’s (2004) categories of semantic functions were applied as a model to classify data accordingly. Finally, Goffmann’s (1974) theory of framing was used as a construct to enable the recipient to reframe her feelings when the condolences were received. This was to facilitate the distinction between the least preferred and most preferred functions of the condolence messages.

Goffmann’s (1974) Theory of Framing

The theory of framing advocated by Goffman (1974) involves organising our experiences and structuring our individual perception of these events which include filtering information, discarding noise and building frames and basic cognitive structures so as to guide us in our perception of reality. This theory was developed for sociology but researchers have also used it in an extended manner to analyse how language is used. Goffmann’s (1974) theory of framing suggests looking at what is going on and what is salient in those experiences. Each of us has a framework with which we use in order to process information and make sense of the social world around

us. In journalism, Tomer (2013) explains, journalists depict their stories by essentially responding to different social cues which are based on their own expectations. How these stories are perceived is based on the knowledge and experiences of the journalists themselves (Tomer, 2013). For the purpose of this paper, the same construct was applied on the local recipient for her to reframe her mind as she recalled her emotional experiences during her bereavement. This task was accomplished through four reflective questions. Her responses were documented manually and her input was used to determine which of those functions were least preferred or most preferred.

The four reflective questions posed to the recipient are:

- What did you really expect from your friends or relatives during your recent bereavement?
- Which of the written forms of condolence message made you feel good or were comforting to you during your bereavement? (Preferred responses)
- Which of the written forms of condolence message made you unhappy or upset you when you read them during your bereavement? (Dispreferred responses)
- How would you have liked these condolence messages to have been written to you, considering that you are well versed in the English language but *yet also* practised the Chinese culture and customs?

RESULTS AND DISCUSSION

Analysis of data is divided into three sections. First, it discusses how Malaysian condolences are composed. Next, it discusses the semantic functions unravelled. Finally, it looks at the recipient’s frame of mind during her moment of vulnerability. This helps to distinguish the functions least preferred or most preferred. The input can help in assessing how condolences should be written for the benefit of harmony and understanding.

How Malaysian condolence messages are composed

The 36 condolence messages which were composed of 985 words and 131 lines were examined for elements of sympathy. This was done by focussing on the frequency of the words used, as illustrated in Table 1.

Similar to the previous reports, the analysis shows that the word “condolence” came up most frequently and this fits into the nature of the message. Other accompanying words which depict sympathy were also identified but their usage was less frequent in comparison. Words which express hope, are religion oriented and which encourage the recipient were also detected and listed in Table 1.

Data presented in Table 1 indicate that Malaysian SMS condolence messages written in English carry the element of “sympathy” as a core. This corresponds with Zunin and Zunin’s (1991) recommendation but the “expression of sympathy” can emerge at the beginning, middle or end of the condolence message as the numbering (line)

TABLE 1
Words commonly used in Malaysian SMS condolences

No.	WORDS	FREQUENCY
A. Words which express sympathy		
1	Condolences	22
2	Sorry / apologies	13
3	Deep (deeply/deepest)	11
4	Loss	10
5	Sad	7
6	Demise	3
7	Grief	2
B. Words which express hope		
1	May you.../ Hope you...	6
2	Hope	4
C. Words which are religion oriented		
1	Pray / prayers	9
2	May God...	3
3	Rest in peace	2
4	Peace	2
5	God Bless him	1
E. Words to encourage		
1	Be / remain strong	15
2	Take care / Take good care	12

of the messages indicates. The analysis also indicates that Malaysian condolences do not adhere strictly to the eight criteria recommended by Zunin and Zunin (1991). This suggests that Malaysian practices differ from westerner’s practice even though their messages may be written in the same language, English. In addition, Malaysian SMS condolences were a combination of expressing sympathy, eulogising, offering assistance, expressing uncertainty, showing concern and expressing wishful thoughts.

Semantic Functions of Malaysian SMS condolences

A total of 51 semantic functions were detected from the 36 SMS condolence messages. These were then categorised according to the frequency they occurred and eight functions were noted. These include showing concern via directives (25.5%), showing sympathy (21.6%), offering assistance (21.6%), expressing wishful thinking (13.7%), giving an explanation before sympathy (5.9%), eulogising the deceased (5.9%), showing sympathy and eulogising the deceased at the same time (3.8%), and showing uncertainty (2.0%). Examples of these functions are further discussed in the section below.

Expressing concern via directives

When constructing a message of sympathy, writers have the intention to share the grief and in expressing their solace, they want to lift the spirit of the recipient. They thus write with great concern. Elwood (2004) states this particular function as a function to express a future orientation for the recipient. In this paper, such a concern came across as “directives” (see Searle, 1975) because the recipient felt as if she was instructed on what to do. This was the least preferred function identified.

“those condolence messages which expressed kind words were in reality telling me what to do...they were giving me directives...be strong, take care... I didn't think that they were real...do these people even

know how tired or exhausted I was? Do they care that I cannot bother to look after myself? Do they even know that I couldn't be bothered to stay strong...for who? For what? For my children? For my future? Do I even care if I had a future? What are they trying to tell me? Why don't they put themselves in my shoes? See if they can be strong or take care.”

Although this function appears to express concern and care for the recipient, it is possible that the recipient may find them vague and less meaningful because in her moment of vulnerability and sadness, how could she be expected to “be strong”? As the recipient asks, “*On what basis do I build my strength when my husband has just died? I haven't even got time to feel sorry for myself!*” Table 2 illustrates some examples.

TABLE 2
Expressing concern via directives

Be strong my dear.
Take good care of yourself and children ya.
Be strong, have faith.
Stay strong and may his soul be blessed and rest in peace
Take good care and be strong.
Please be strong and our prayers are with you.
Take care.
Please take care.
Take good care of yourself.
Do take care.
Be very strong
Take care, XX.
Remember him with a smile.
Be strong and take care ya!

Expressing sympathy

Examples of the expression of sympathy are presented in Table 3. Writers expressed their sympathy through words like “condolence(s)”, “loss”, “sad”, “sorry”, and “grief”. As Zunin and Zunin (1991) recommended, “heartfelt” was used, which might be conveyed through the adverbial phrase of “very sad”, “so sorry”, “very sorry” and adjective phrase, “deepest condolence”.

TABLE 3
Expressing sympathy

My condolences.
Sorry about your recent loss.
My heartfelt condolences.
I am indeed very sad to hear of the sudden demise of your beloved.
So sorry for the news that we got this morning.
XX, very sorry to hear about your beloved’s passing.
I am really sorry to hear of your loss.
My condolence to you and your family.
My deepest condolence to you and your family.
I am sorry.
Sharing your grief.

Offering assistance

In this function, writers offered to listen/talk or just help in whatever way possible or necessary. The recipient mentioned that even though she wanted to talk to someone very much, she could not garner enough strength and courage to talk openly because she was not sure if these people would judge her or not. Table 4 illustrates some examples.

TABLE 4
Offering assistance

Let me know if I can be of any assistance.
Please let me know if there is anything that I can do to help.
Don’t hesitate to call if I can be of help.
Let me know if I can be of any assistance.
And if you need someone to talk to please call me anytime.
If there’s anything I can do just let me know.
I will standby.
If you need to talk things out, I am around.
I have gone through that and I know how difficult it is.
And if you need someone to talk to please call me anytime
but if you needed anything
or if there is anything I could do to help.
I’m more than willing to.
With much love and is there anything that I can help with?

Expressing wishful thinking

From the analysis, it was observed that some condolences were written to express the writer’s personal hope. This category of message was written preceded by the modal verb, “may” and “wish” followed by the verb “hope”. They were all expressives (Searle, 1975) which denoted conditional states which may or may not be achieved. This type of message came across as wishful thinking because it was not meant to be fulfilled. Likewise, they were deemed ambiguous and unacceptable by the recipient.

“It is wishful thinking for the writer because at this moment of pain and sadness, I couldn’t care for anything else. I cannot care for God or for

anyone else, my emotion is numbed with grieve and sadness, I care not for strength from anyone else...all I want is for all this happening to disappear...to go back in time and to make my life normal as before I lost my husband.... I just want to grieve my pain and mourn my loss. Don't hope for me because I see that as false...if you really care for me, come and stand by my side...not write me these messages!"

TABLE 5
Expressing wishful thinking

May you stay strong.
May God give you strength to wade through the time of grieve.
May you regain strength and reorganize your situation for your well being and more so for your children.
Hope you be strong in going through this.
Hope you and your family will unite in going through this.
Wish I can be there for you during this difficult time.
Wish I could be there for you now.

Explanation before expressing sympathy

Another pattern revealed in the data was that of giving an explanation before expressing sympathy. This is not a common composition. In her reflection, the recipient said, "I am not sure why there is a need to explain...I won't blame anyone...so there is no need to explain".

TABLE 6
Explanation before expressing sympathy

Shock and disbelieve over XX's news.
I was informed by Dr. B that your beloved husband has passed away.
Just heard the sad news

Eulogy for the deceased

Zunin and Zunin (1991) mentioned that saying something good of the deceased (if you know him/her) is good. The practice of eulogising the deceased was found in the data. Although "eulogising the deceased" was not a culture of the Chinese, the recipient mentioned that this message was beneficial to her as it helped her to recall the good memories of her husband. The eulogy exemplified here merely consists of a short description of the deceased. However, it was noted that the words used were positive. Some examples are presented in Table 7.

TABLE 7
Eulogy for the deceased

God bless him most.
He was a good man.
Your husband is one of the most genuine, sincere and honest persons that I have met in my life.

Expressing sympathy and eulogy at the same time

To a small extent, some messages conveyed a deeper sense of emotion which included a description of the deceased (Eulogy). A few examples are presented in Table 8.

Table 8.
Expressing sympathy and eulogy

Our deepest condolence to your family for the loss of such a great father, a loving husband and a cheerful man (eulogy) who served others dutifully all his life.

Heartfelt condolences to you and your sons on the demise of your beloved husband and their beloved father (eulogy)

Expressing uncertainty

When one is at a loss for words, one just stays silent. Data indicate that a writer may express this uncertainty directly by just saying “I dunno what to say”. Only one example was identified. The recipient preferred this function the most. She felt that it was sincere and she agreed that no one really knows what to say or how to say words of comfort to a person who had just lost her beloved.

Table 9
Expressing uncertainty

I dunno what to say

CONCLUSION

This paper has illustrated with authentic data how Malaysian SMS condolence messages were constructed. The paper shows that Malaysian condolences contained the element of sympathy as a core of the message. The analysis found that the word “condolence” implying sympathy, appeared 22 times in the context of 985 words. This means that it was used only 2.3% of the time. As the core of the message, sympathy may be expressed in the beginning, middle or at the end of the composed message.

Indeed, all the written condolence messages justified the purpose of the writing, which is to express sympathy. However, not all of the eight criteria proposed by Zunin and Zunin (1991) were present. It has not been ascertained why the writers’ recommendation was not adhered to by Malaysian writers. Further investigation may be necessary and it is probable that most Malaysians, including those who are professionals, may not have acquired the skill because they have not been exposed to the art of writing condolences in English.

Of the eight functions unravelled in this paper, expressing concern via directives was the most common and expressing uncertainty was the least common. The former was least preferred and the latter most preferred. The rest of the semantic functions detected were categorised as expressing sympathy, offering assistance, expressing wishful thoughts, giving explanation before sympathy, expressing sympathy and eulogising the deceased at the same time followed by eulogising the deceased.

This paper also used the narrative evidence of the recipient to gauge which functions contained in the condolence message were misinterpreted or misunderstood and which were well received. The input served as insight into understanding how messages were perceived. The recipient mentioned that the writers had not thought about her feelings when they “directed” her on what to do. In Elwood’s (2004) term, it was a “future-oriented remark to show encouragement”

but it was clearly misinterpreted by the recipient. It would appear that “directives” were perceived as a disempowerment to the recipient. Studies on pragmatics often view this speech act negatively because it serves what Searle (1969, 1975) terms as statements attempting to make others fit into the proposition. The recipient also remarked that the writers sometimes came across as being insincere when their condolence message contained wishful thinking.

This paper has indicated that some of the writer’s intentions could have been misinterpreted by the local recipient because of the ambiguity of the intention. Based on the negative responses made, it is thus recommended that the construction of condolence messages be further explored in order to confirm whether or not there is any cultural variation within the context of intercultural or crosscultural communication. With the advent of globalisation, people need to be educated on the speech functions of condolences. They also need to be exposed to the appropriateness of condolence writing. This is vital as faux pas can be committed with the least intention even within the same community and country.

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Spiritual Leadership Values and Organisational Behaviour in Malaysian Private Institutions of Higher Education

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ABSTRACT

Malaysia wants to be a part of the bandwagon in the industry of higher education, thus, the number of private higher education institutions has grown drastically in the recent years. Moreover, the assimilation of cultures and values among the races in Malaysia has contributed distinctive organisational cultures that affect leadership values and organisational behaviour specifically in the private institutions of higher education sector. The purpose of this study is to identify spiritual leadership values embraced by the leaders in private institutions of higher education, as well as the relationship between spiritual leadership values and organisational behaviour (job satisfaction, organizational commitment and intention to quit). In total, 302 academics and administrative staff from 7 private institutions of higher education in Malaysia participated in the study. Questionnaire and non-probability sampling were used in the data collection for this study. The findings show that love, hope, and peace are associated with membership and meaning, meanwhile membership and meaning are associated with organisational behaviour. Hence, this study has contributed in leadership training that will affect the turnover rate and ultimately result a cost effective managerial policing in the Malaysian private institutions of higher education.

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INTRODUCTION

Leadership is one of the important factors in an organisation and it is needed at all levels in the organisation. Many scholars and managers agree that effective leadership is required to meet most organisational challenges (DuBrin, 2010). Without effective leadership, it can have an impact on the organisation to achieve profit and productivity. In higher education leadership, it is also important in that it helps to bring success to the institution through providing a conducive teaching and research environment for academics (Shattock, 2010) and career development for administrative staff (Wasseem, 2010).

Leaders who are grounded with values congruent with the organisation's values consequently are able to translate those values into action, which will have significant impact to the organisation (Stanley, 2008). More, specifically, leadership based on values provides long-term wisdom and sustainability to leaders, employees and businesses (Pruzan, 2008). These values that are integrated in leadership, are related to organisational behaviour such as leader integrity, organisational commitment and performance (Leroy & Palanski, 2012), trust from supervisor and intention to quit (Mulki, Jaramillo, & Locander, 2006), as well as spirituality and intrinsic job satisfaction (Marschke, Preziosi, & Harrington, 2011).

Spiritual leadership is a theory which focuses on intrinsic values that motivate individual intrinsically (Fry, 2003). According to Sendjaya (2007), spiritual leadership is driven by a sense of higher

calling, finding purpose in life, promoting values that transcend self-interest and giving meaning to work. Spiritual leaders are concerned about social and moral matters, for example, being responsible for oneself, enthusiastic at work, able to take up social responsibility, organised and reflective in the tasks given instead of caring about matters that involve only self-interest (Huang & Shih, 2011). According to Fry, Vitucci and Cedillo (2005), spiritual leadership comprises values, attitudes and behaviour that motivate individual intrinsically through transcendent vision and values that are congruent in individual, departmental and organisational level. This then increases organizational commitment, improves performance level and employees' well-being to achieve organisational transformation.

This study is built on Fry and his colleagues' spiritual leadership theoretical framework that is based on western culture and values (2005). Hofstede (2001), a renowned researcher who conducted studies on culture differences in work related values, discovered four main organizational values; power distance, uncertainty avoidance, individualism-collectivism and masculinity-femininity. These organisational values indicated values differences between Western and Asian culture, which unquestionably draw a clear and cogent understanding between the two primary cultures. On the other hand, Chen and Li (2013) observed that there are differences in cultural dimension between the Chinese and the U.S. samples

in their spiritual leadership study based on Fry's spiritual leadership model. Jogulu (2010) also found differences in the culture and leadership in Malaysia and Australia. In other words, culture has a tremendous impact on leadership.

Malaysia has more than 450 private institutions of higher education (Department of Higher Education, 2014). It grows rapidly in the recent years to achieve the vision of becoming the world class centre of knowledge in the year 2020. Malaysia consists of three main races - Chinese, Indian and Malay, and each race embraces and practises their culture and values in the society. The uniqueness of the assimilation facets among the three races makes Malaysia a distinctive context for any organisational research. Henceforth, the focus of the study is to investigate the spiritual leadership values in Malaysia and whether the values in Fry's spiritual leadership can be generalised for the institutions of higher education in Malaysia. The latter context bears a myriad of distinctive co-values and co-cultures which in turn has an impact on employees' organizational behaviour.

Spiritual Leadership

According to Fairholm (1996), spirit is a set of internal values and principles embraced by people that have an impact on identity and meaning in life. He further explained that spiritual leadership focuses on ethical values which are the American core values. These values enable leaders to make connection with employees' internal world of moral values subsequently strengthen and enhance

employees' commitment and relationships with organisation. Fry presented a spiritual leadership theory in a causal model that has three components; leaders' value attitudes and behaviour, followers need for spiritual survival in the organization and organizational outcomes (Fry, Vitucci, & Credillo, 2005). Values embraced by leaders affect organisational commitment and productivity through a sense of being members of the organisation and meaning of work given by the employees of the organisation. The three main spiritual values are altruistic love, hope / faith and vision. Altruistic love is the sense of wholeness, harmony and well-being from the interaction of the leader and the employees. Hope / faith are the values embraced by leaders toward the organisation. Lastly, vision describes the organization's direction and reasons why leaders embraced it (Fry, Vitucci, & Credillo, 2005). Hence, these values affect organisational effectiveness.

In spiritual leadership studies, love, hope and vision are the spiritual leadership values which comprise values, attitudes and behaviours that are related to membership and calling (Fry, 2003; Fry, Vitucci & Cedilo, 2005). Leaders who love and care for their employees and have faith in the organisation's vision, together with their employees, will craft this vision which is congruent with their principles and values. Subsequently, this union will give employees the meaning and purpose to work by having a sense of being appreciated or membership to the organisation. This is referred to as employees' spiritual survival

according to Fry and his colleagues (2005). Meanwhile, Chen and Li (2013) grouped employees' membership and meaning or calling as a source of motivation to study employees' spiritual survival in an organisation. Membership is a source of motivation toward organisation and meaning or calling is a source of motivation toward work. Both motivational principles are imperative for employees to survive at their workplace.

Values embraced by Malaysians

The Malays, Chinese and Indians are the three races that make up the majority of the population in Malaysia. For them, values serve as guidance in their daily life. One of the essential values embraced by the Malays is a sense of loyalty and emotional interdependence to the group, and harmonious relationship with others to provide the meaning for one's existence in a social context (Abdullah 1996). Other values that the Malays embrace are honesty (Zawawi, 2008), intellect or kindness "budi" (Abdullah, 1996), and team work (Ahmad, 2001). On the one hand, the influence of Confucianism is strong among the Chinese. Confucianism values the maintaining of harmony and mutual respect in hierarchical society and different places (Lin, Ho, & Lin, 2013). Confucius valued "ren" which is to maintain a good social relationship, humanity and moral values. The Chinese upheld Confucius values such as kindness, benevolence and being approachable (Tsui, Wang, Xin, Zhang, & Fu, 2004). On the other hand, the

Indians value teamwork (Subramaniam, Othman, & Sambasivan, 2010), corporation and participation (Abdullah, 1996) and consideration (Zawawi, 2008). A study that focuses on Malaysian work values discovered that tact and politeness "sopan santun" are the core values (Zawawi, 2008). These values appreciate work relationship among colleagues at workplace. In a study by Wong, Mahmud and Omar (2012), they pointed out the common values for Malaysian leadership, which are peace and harmony. Referring to the values embraced by the three races, a collective society such as Malaysia accents on kindness, teamwork, maintaining good relationship, corporation and consideration, which are integral in maintaining stability and equilibrium of the organisation. Hence, the common ground for all the values is to enjoy peace and harmony at the workplace in the context of Malaysian organisations.

In Fry, Vitucci and Cedillo's study (2005), altruistic love encompasses harmony, love and care from leader and organisation. This value is able to replace jealousy, envy and anxiety with peace and harmony among employees of an organisation. Therefore, employees who are loved and cared for by the organisation and leaders will enjoy peace and harmony at the workplace. In other words, peace and harmony are additional values deemed important by employees and leaders. Hence, the proposed hypothesis for this study is:

Hypothesis 1: Spiritual leadership values (love, hope, vision, peace and harmony) have

a positive relationship with membership and meaning / calling.

Membership and meaning/calling and organizational behaviour

Organisational behaviour is an understanding of individual, group and organisational behaviour that has impact on organization performance and effectiveness (Kreitner & Kinicki, 2012). In this study, the organisational behaviour focuses on individual level where job satisfaction, organisational commitment and intention to quit are the fundamental elements at this level. According to Fry, Vitucci and Cedillo (2005), membership and meaning/ calling will provide an organisational favourable outcome from the aspect of productivity and organisational commitment. Employees who feel understood and appreciated (membership) and give meaning to their work have good productivity and organizational commitment. Other studies have also shown that meaningful work and sense of community are associated with organisation commitment, job satisfaction

and intention to quit (Milliman, Czaplewski, & Feruguson, 2003). Sense of community refers to membership as employees believe they belong to the family of the organisation and this subsequently affects organisational behaviour. The study is consistent with the findings from Duffy and his colleague (2012), where calling and work meanings are associated with job satisfaction and commitment. Hence, the proposed hypothesis is:

Hypothesis 2: Membership and calling have a positive relationship with organisational behaviour (job satisfaction, organisational commitment and intention to quit).

In this study, spiritual leadership values consist of love, hope, vision and peace and harmony. These values are related to membership and calling through spiritual survival. Therefore, membership and calling are related to job satisfaction, organisational commitment and intention to quit. Fig.1 shows the research framework of spiritual leadership values, spiritual survival and organisational behaviour of the study.

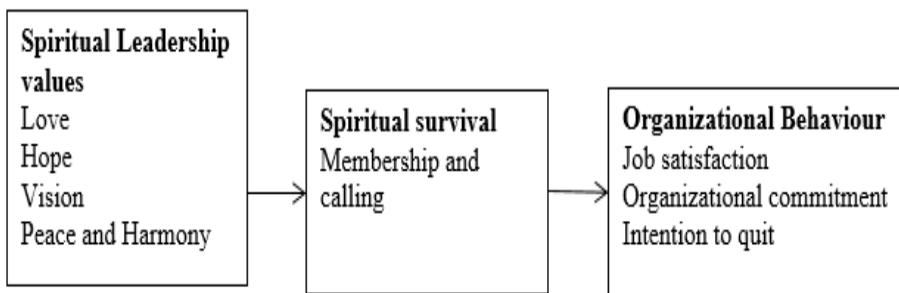


Fig.1. Research Framework

METHOD

A non-probability sampling was used in this study for data collection. Copies of the questionnaire were distributed to 480 academics and administrative staff from 7 private higher educational institutions in Klang Valley, Malaysia. From the 480 questionnaires distributed, 323 questionnaires were returned while 21 questionnaires were discarded due to incompleteness. Therefore, the remaining 302 questionnaires were used for the data analysis.

The survey questionnaire consists of 5 sections. The first section measures spiritual leadership values with 8 items on peace and harmony, which was developed and validated by the researchers and there were 26 items on Spiritual Leadership scale; vision, hope, love, meaning and membership (Fry, Vitucci, & Cedillo, 2005). The second section has 8 items on job satisfaction (Firth, Mellor, Moore, & Loquet, 2004); Section 3 has 5 items on organisational commitment (Firth, Mellor, Moore, & Loquet, 2004); Section 4 has 6 items on performance (Pearce & Porter, 1986) and the last section has 4 items on intention to quit (Firth, Mellor, Moore, & Loquet, 2004; Lee & Mowday, 1987). The questionnaire uses the 5-point Likert scale with a range of 1 “strongly disagree” to 5 “strongly agree”.

RESULTS

Reliability and Validity

Confirmatory factor analysis was used to examine reliability and validity of the

measurement instrument in this study. Cronbach Alpha shows satisfactory to good reliability, ranging from 0.727 to 0.926. According to Nunnally and Bernstein (1994), a reliability coefficient with more than 0.7 is considered satisfactory (Table 1).

Convergent and discriminant validity was conducted to investigate the construct validity of the measurement instrument. Hair, Anderson, Tatham and Black (1998) recommended the use of factor loading, composite reliability and average variance extracted (AVE) to study convergent validity. The factor loading for the parameters ranged from 0.73 to 0.89, with all the parameters above 0.5. The composite reliability readings range from 0.75 to 0.88, which exceeds 0.7 as recommended by Hair, Anderson, Tatham, and Black (1998). The AVE readings range from 0.58 to 0.69, the values are greater than 0.5 as suggested by Fornell and Larcker (1981). The results are depicted in Table 1.

Discriminant validity analysis used AVE of a latent variable to compare with other squared correlation latent variables or constructs. The AVE of the construct should be greater than the other squared correlation latent variable or constructs. The results shown in Table 2 indicated that all the AVE of the constructs are greater than the squared correlation of the latent variables.

Measurement model

The measurement model consists of spiritual leadership values (hope, love, and peace), spiritual survival (membership and calling) and organisational behaviour (job

TABLE 1
Internal Reliability and Convergent Validity

Construct	Item	Internal reliability	Convergent Validity		
		Cronbach Alpha	Factor Loading	Composite reliability	AVE
Peace	P1	.905	0.822	0.87	0.68
	P2		0.849		
	P3		0.838		
	P4		0.805		
	P5		0.801		
	P6		0.834		
Love	L1	.926	0.854	0.86	0.68
	L2		0.820		
	L3		0.842		
	L4		0.825		
	L5		0.822		
	L6		0.765		
Hope	H1	.905	0.755	0.88	0.69
	H2		0.859		
	H3		0.869		
	H4		0.844		
Membership	M1	.921	0.848	0.87	0.68
	M2		0.885		
	M3		0.779		
	M4		0.802		
	M5		0.826		
Satisfaction	S1	.727	0.773	0.76	0.58
	S2		0.744		
Quit	Q1	.777	0.965	0.75	0.58
	Q2		0.725		
	Q3		0.518		
Commitment	C1	.876	0.860	0.86	0.68
	C2		0.834		
	C3		0.779		

satisfaction, organisational commitment and intention to quit). The measurement model of vision showed poor fit with the data; hence, it was eliminated for further analysis. Membership and calling were left with

single variable after a factor analysis was performed. The results, which are similar with findings from Chen and Li (2013), are shown in Tables 1, 2, and 3, and Fig.2.

TABLE 2
Discriminant validity

Constructs	1	2	3	4	5	6	7
Hope	0.69						
Love	0.45	0.68					
Peace	0.19	0.39	0.69				
Membership	0.36	0.54	0.47	0.68			
Satisfaction	0.24	0.35	0.35	0.52	0.58		
Commitment	0.41	0.33	0.22	0.33	0.34	0.68	
Quit	0.07	0.10	0.11	0.14	0.15	0.11	0.58

Notes: Diagonal represents the AVE others are squared correlations

TABLE 3
Confirmatory factor analysis for measurement model

	χ^2	<i>df</i>	Cmin/ <i>df</i>	CFI	GFI	AGFI	NNFI/ TLI	NFI	IFI	RMSEA
Hope	50.32	5	10.01	.95	.94	.81	.91	.95	.95	.17
Love	53.23	9	5.91	.96	.94	.86	.94	.96	.96	.13
Peace	207.10	35	5.92	.94	.86	.78	.92	.93	.94	.13
Membership	41.83	5	8.37	.96	.95	.93	.93	.96	.96	.16
Satisfaction	.00	Saturated model								
Commitment	.00	Saturated model								
Quit	.00	Saturated model								

Measurement model in this study used AMOS 16 with maximum likelihood estimate to analyse the model fit. The measurement model used Comparative Fit Index (CFI; Bagozzi & Yi, 1988; Hu & Bentler, 1999), Goodness-of-fit index (GFI; Chau & Hu, 2001), Adjusted Goodness-of-fit index (AGFI; Chau & Hu, 2001), Normed Fit Index (NFI; Bentler & Bonnet, 1980), Non-Normed Fit Index (NNFI or TLI; Bentler & Bonnet, 1980; Tucker & Lewis, 1973) and Root Mean Square Error of Approximation (RMSEA; Browne & Cudeck, 1993) fit indices to assess the model. CFI, GFI, NNFI/TLI and NFI for all the measurement models are above 0.9, 0

indicating a poor fit and 1 indicating the best fit. On the other hand, RMSEA with a lower index which is less than 0.08, indicates the data fit with the model (Browne & Cudeck, 1993). Generally, the measurement model indicated good fit of data and model, satisfactory level of reliability, convergent validity and discriminant validity.

Structural model

Model for goodness of fit indices indicated the path coefficients for spiritual leadership values to membership vary. Path coefficient peace and harmony to membership and love to membership are significant (<.001), however, hope to membership is not

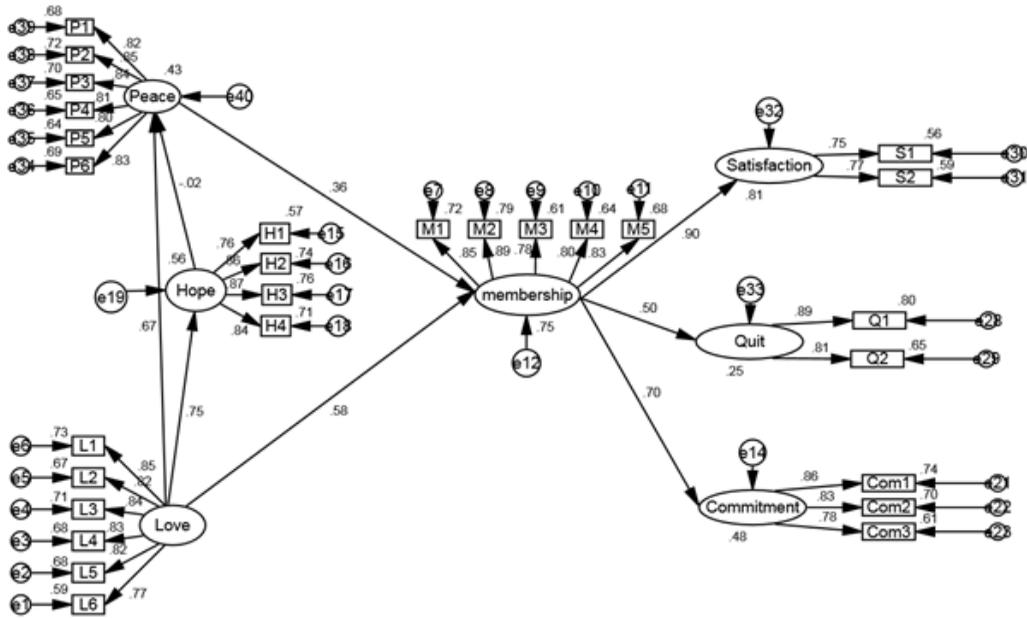


Fig.2 : Structural Model for spiritual leadership values and organizational behaviour

TABLE 4
Structural model and fit indices

Fit index	Study	Recommended Values	Sources
df	456		
χ^2	1072.332		
χ^2/df	2.352	<3.00	Bagozzi and Yi (1988)
P value	0.000	>0.05	
Comparative Fit Index (CFI)	0.918	>0.90	Bagozzi and Yi (1988)
Hu and Bentler (1999)			
Incremental fit index (IFI)	0.907	>0.90	Bentler (1990)
Goodness-of-fit index (GFI)	0.818	>0.90	Chau and Hu (2001)
Adjusted Goodness-of-fit index (AGFI)	0.867	>0.80	Chau and Hu (2001)
Normed Fit Index (NFI)	0.849	>0.90	Bentler and Bonnet (1980)
Non-Normed Fit			
Index or Tucker Lewis (NNFI or TLI)	0.911	>0.90	Bentler and Bonnet (1980)
Root mean square error of approximation (RMSEA)	0.067	<0.08	Browne and Cudeck (1993)

significant ($>.001$). Path coefficient from membership to organisational behaviour; job satisfaction, organisational commitment and intention to quit are significant ($<.001$). All paths are significant ($<.001$), except for hope to peace and hope to membership. The results are shown in Figure 2 and Table 4. The first hypothesis is partially supported and the second hypothesis is fully supported.

DISCUSSION AND CONCLUSION

The purpose of this study is to examine the spiritual leadership values in the context of Malaysian private institutions of higher education and the relationship of the values with organisational behaviour. The results yielded the internal reliability, convergent and discriminant validity is good. In addition, the measurement model and structural model of spiritual leadership values and organisational behaviour also obtained a good fit between model and data. In other words, the spiritual leadership values are shown applicable in the Malaysian context. The results also indicated spiritual leadership values, love, hope and peace through membership and calling enhance job satisfaction, organisational commitment and reduce the intention to quit in a Malaysian context.

In this study, love is related to hope and peace. According to Fry, Vitucci and Cedillo (2005), love is care, concern and appreciating others and self. Leaders who care, show concern, are considerate and walk their talk will develop employees' faith / hope toward the organisation. At the same time, care and concern from

leaders also affect peace and harmony of the organisation. Leaders who serve the organisation and treat the employees fairly, provide support to employees, and be a good listener to them, employees will enjoy peace and harmony in the organisation. The finding is similar to Reave's study (2005) on spiritual leader practices such as respect, treating others fairly, being a good listener, as well as showing care and concern, and recognising employees. Collective culture among Asians is being able to relate with the leader like their own family members (Jogulu & Ferkins, 2012) because the bond will bring harmony and peace in an organisation. The findings of this study showed that leaders who lead the three races from different backgrounds in educational institutions should care and show concern for their employees, have faith in the organisation, as well as develop peace and harmony within the organisation.

The findings also showed that spiritual leadership values are associated with membership and calling. Membership and calling are the values for leaders' and employees' spiritual survival in an organisation. In this study, peace and love values have helped developed a sense of membership and calling or understanding and appreciation among employees. When leaders serve the employees, treat them fairly, provide them support, and listen to them, they are able to have a sense of membership and calling. Employees feel they are appreciated and recognized by the organisation and leaders. Thus, this study is consistent with the finding of Permaruoan,

Saufi, Raja Kasim and Balakrishnan (2013), whereby the feeling of being appreciated and connected with leaders is related with organisational commitment and passion. This feeling affects organisational behaviour; job satisfaction, organisational commitment and intention to quit. Besides the preceding organizational behaviour, love is an equally vital value. According to Fry, Vitucci and Cedillo (2005), love is associated with membership and membership is associated with organisational behaviour. In other words, spiritual leadership values affect organisational behaviour through the values upheld by the leaders and the organisation. The findings suggested that leaders who embrace spiritual leadership values will enhance employees' sense of membership and calling, subsequently, increase job satisfaction level, organisational commitment level and reduce intention to quit.

This study focuses on spiritual leadership values in private institutions of higher education and organisational behaviour. Nonetheless, it is unclear if the findings can be generalised into public institutions of higher education because further study is needed to be done in the public institutions of higher education. There are two implications of the study. This study examined spiritual leadership values developed by Fry (2003) and Malaysian leadership values in education institution. Hence, this study can be used for research in spiritual leadership and organisational spirituality in Malaysia. In addition, organisations may use the findings of spiritual leadership values for leadership

training and development because leaders who are equipped with spiritual leadership values will create positive social tone in an organisation, and thus, employees will feel appreciated and valued by which successively lessen the intention to quit and yield a cost effective in management regulating.

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Dispute Avoidance Procedure: Observing the Influence of Legal Culture towards a Workable Legal System

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ABSTRACT

It is pertinent to specifically conduct research on the viability of introducing dispute avoidance procedure (DAP) for construction industry due to the lack of research in this area, as most of the current research covers various issues within dispute resolution procedure and management field. The objective of this study is to examine the future of DAP in the Malaysian construction industry by looking into the perceptions of the construction industry players. Data were collected through interview of selected respondents and analyses to reveal patterns to help formulate a viable DAP mechanism. NVivo software has been used to manage and organise complete interview transcripts and facilitate data analysis process for this study. This study reveals that the existing DAP mechanisms are not viable for the Malaysian construction industry at present, mainly due to the issue of costing. Thus, a modified version of DAP was formulated to promote a viable mechanism. This study suggests that the structural elements of a viable DAP mechanism could be in the form of an

‘involvement of top management’ from both contracting parties (without the involvement of any third parties) who are decision makers or persons with financial authority, and the process is through ‘discussion and negotiation’. In essence, this study captures the legal culture and trade usage of the industry which assisted the formulation of a viable DAP mechanism.

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INTRODUCTION

Given the contributions of the construction industry to the national economy and the list of projects launched under the 9th and 10th Malaysia Plan (EPU, 2010; Ismail, 2007; MIDA, 2007; NCER, 2007; Zainuddin, 2007), it is important for the relevant parties to make visible efforts to ensure that the projects will successfully be implemented. The problem is that conflict and dispute are said to be common because of the complex nature of the construction industry and the involvement of so many parties along the contractual chain, adversarial relationship, uneven risk allocation and uneven bargaining power (Fenn *et al.*, 1997; Harmon, 2003a; Latham, 1994). Without a proper mechanism to avoid dispute in the first place, once conflict turns into dispute it could affect project success.

According to Cheung *et al.* (2000) “project success is frequently based on the final outcome of the triple constraints of time, cost and quality, but frequently also the process through which to achieve these objectives is neglected”. In spite of the fact that project success could be influenced by many other factors, a mechanism that could effectively avoid conflict from escalating into dispute could be introduced as an alternative to the currently available dispute resolution procedures in the Malaysian construction industry, owing to its potential in mitigating the negative effect of disputes on the project success.

With regard to the drawbacks in resolving disputes, *Intelek Timur Sdn Bhd v Future Heritage Sdn Bhd* [2004] 1 MLJ 401, [2004] 1 CLJ 743 is a landmark case decided in the Federal Court of Malaysia, demonstrating that litigation and arbitration processes can be costly, time consuming and sometimes unpredictable. The adverse impacts of old-fashioned litigation and arbitration processes adopted in the early days has led to the introduction of alternative dispute resolution (ADR) mechanisms for resolving disputes (Grossman, 2002). ADR consists of several dispute-resolving methods such as adjudication, mediation, mini-trials and others (Cheung & Suen, 2002; Gebken & Gibson, 2006). There are some inherent disadvantages that have been identified in previous studies, in that: ADR has been used as delaying tactics, it is costly, adversarial and damaging to the relationships of the parties concerned (Bercovitch & Gartner, 2007; Brooker, 1999; Brooker & Lavers, 1997).

Nevertheless, ADR is a common and familiar mechanism among the industry players, owing to the availability of these methods in the standard forms of Malaysian contracts. For instance, most of the standard forms of contract currently include a formal series of steps to be taken to resolve any disputes through arbitration (CIDB, 2000; IEM, 1989; PAM, 1998, 2006; PWD203A), mediation (CIDB, 2000; PAM, 1998), and most recently, adjudication (PAM, 2006). However, Gebken and Gibson (2006), in their study, estimated that the money spent on transactional cost for dispute resolution based on arbitration, mediation

and negotiation might amount between \$4 to \$12 billion or more each year. In this respect, Cheung *et al.* (2000) suggested that in determining the success of project dispute resolution, the largest dispute must be resolved at site level. Thus, a question arises, isn't it important to avoid dispute from arising in the first place, given its potential adverse ramifications for a particular construction project?

Harmon (2003a) insisted that disputes should be resolved in the most economical way with the highest satisfaction for both parties. In order to do so, the mechanism should also avoid overly complicated procedures and promote resolution of conflicts at the lowest possible organizational and procedural level (Cheeks, 2003; Cheung *et al.*, 2004). Further, the project managers should also be expected to actively focus on avoiding and preventing conflicts from escalating into claims, and resolving claims to prevent them from becoming disputes (Ng *et al.*, 2007; Singh, 2003). Indeed, the underlying philosophy of this obligation is derived from an established notion that 'prevention is better than cure'.

THE FUNDAMENTAL DIFFERENCE BETWEEN DISPUTE RESOLUTION AND DISPUTE AVOIDANCE PROCEDURE

Due to the fact that dispute is inevitable in the construction industry and the negative effect it has on a project, the construction industry should focus on detecting and managing conflict at the soonest possible, to avoid it from escalating into a dispute. In this

regard, dispute avoidance procedure (DAP) has gained popularity in the construction industry of some major jurisdictions, although it is entrenched mainly as trade practices and customs in a large infrastructure project through an agreement between the parties and incorporation of relevant clause in the standard forms of contract. The term DAP has been frequently used by Dr. Paula Gerber in her papers (Gerber, 1999, 2000, 2001; Gerber & Ong, 2011a, 2011b).

However, following the work of Mohd Danuri *et al.* (2010), this study adopts the categorisation which includes the three existing DAP, namely, dispute review board (DRB), dispute adjudication board (DAB) and combined dispute board (CDB) (see Table 1). Generally, the three existing DAP was chosen based on the following main criteria (Mohd Danuri *et al.*, 2010):

- a. the mechanism must be established soon after the contract has been awarded, even before any physical work on site begins;
- b. the board must be actively involved throughout the project from the beginning, usually by attending pre-scheduled site meetings to familiarise them with the nature of the works and contractual issues pertaining to the projects;
- c. the mechanism must avoid overly complicated procedure, should move promptly to resolve any conflict as quickly as possible and should have been widely known and used; and

d. the board must be actively involved in the resolution of any conflict either by imposing a binding decision or making recommendations that are not binding.

The fundamental difference between dispute resolution and dispute avoidance has also been discussed in the previous literature (Mohd Danuri *et al.*, 2010). The main characteristic of dispute resolution procedure is where it will only come into exist if there is a dispute and reference be made to it. Generally, the mechanisms under dispute resolution procedure can be classified under three (3) main mechanisms, namely, litigation, arbitration and alternative dispute resolution (ADR). Unlike dispute resolution procedure, DAP is a mechanism provided usually in the contract to effectively avoid disagreement from escalating into dispute, meaning to say, the system is already in

operation even before any disputes exists (Cheung & Suen, 2002; Gerber, 1999), as shown in Fig.1.

It is suggested that the fundamental difference between dispute resolution procedure and DAP is contingent upon the time of establishment and operation of the procedures (Mohd Danuri *et al.*, 2010). Therefore, the main characteristic of a DAP is that it involves an independent third party intervention and the procedure must be established at the time the parties enter into a contract. The philosophy underlying the DAP concepts “advocates that problems be brought ‘out in the open’ during construction” or in other words conflicts are handled and resolved soon after they occur, before it escalates to a major disagreement (dispute) that could last for duration of contract or even after the project is completed (Thompson *et al.*, 2000).

TABLE 1
Proposed Categorisation

Dispute Avoidance/Conflict Management	
Management methods	Non-escalation mechanisms <i>non-binding*</i> / <i>binding**</i>
Quality matters <ul style="list-style-type: none"> • Total quality management • Co-ordinated project information • Quality assurance Choice of procurement systems <ul style="list-style-type: none"> • Partnering • Alliancing Bespoke contracts	<ul style="list-style-type: none"> • Negotiation*/** • Project mediators* • Project arbitrators** • Dispute resolution advisers (DRA)*/** Dispute avoidance procedure (DAP) <ul style="list-style-type: none"> • Dispute review board (DRB)* • Dispute adjudication board (DAB)** • Combined dispute board (CDB)*/**
Dispute Resolution	
<i>non-binding</i>	<i>binding</i>
<ul style="list-style-type: none"> • Conciliation • Mediation • Executive tribunal 	<ul style="list-style-type: none"> • Litigation • Arbitration • Adjudication • Expert determination

Adapted from Brewer (2007), Fenn *et al.* (1997) and Gerber (2001)

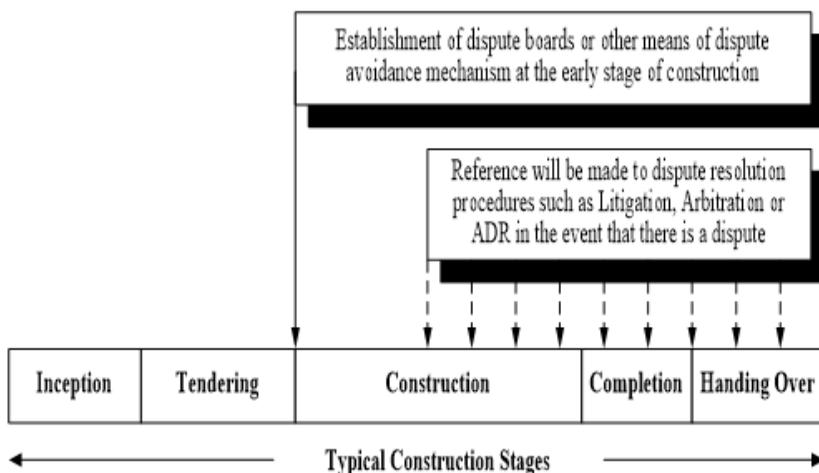


Fig.1: Interception of dispute

RESEARCH METHODOLOGY

A review of previous research works related to DAP shows that there has been no attempt to study the viability of DAP in the local context (Mohd Danuri *et al.*, 2010). Thus, the objective of this study is to examine the future of DAP in the Malaysian construction industry by looking at the perceptions of the construction industry players. According to Sarantakos (2005), it is important to recognise that every researcher brings some set of assumptions into the research paradigm, which will guide the researcher in adopting an appropriate research approach. From the ontological perspective of qualitative research paradigm, reality is not objective (especially social reality) and is socially constructed. The assumption is that there is a need to study how people see the world (not the world itself) because perception governs action and has real consequences (Sarantakos, 2005).

Perceptions of the industry players are also said to be related to culture,

whereby “culture is a way of perceiving the environment” (Reisinger, 2009). In this regard, Reisinger (2009) acknowledges suggestion made by Samovar *et al.* (1981) that “the similarity in people’s perceptions indicates the existence of similar cultures and the sharing and understanding of meanings”. Further, there is a theoretical position which asserts that law is “a system or body of law tied to specific levels or kinds of culture” (Friedman, 1969). In addition, from the jurisprudence point of view, the philosophers of law seek to find out what the law is and how it works in general, and to identify how they can be modified, changed or adapted (D’Amato, 1984).

In line with jurisprudence and the theoretical position identified above, Tso (1999) describes culture as a social system created by a group of people through “its shared behaviour, practices, rules and rituals”, which are regularly used to interact and communicate with each other, and then become the norms and rules that they

maintained. She offers an example whereby a sub-culture may exist within a designer's society, which is often associated with languages and communications emanating from social institutions and structures such as governments, economies, and legal systems, as well as geographical and environmental factors (Tso, 1999). Further, there are different levels of culture which are interdependent and influence each other (Reisinger, 2009). For instance, a sub-culture of those professionals or stakeholders involved in the construction industry forms and influences an industry's culture in a particular country (Reisinger, 2009).

As for the legal culture, Hinchey and Perry (2008) acknowledge that unlike in the United Kingdom (U.K.), the difference in legal culture is regarded as the primary reason why adjudication is expected not to work in the United States (U.S.) in the near future. The lawyers' insistence for exchange of documentations and discovery of evidence, and the existence of positional tensions or contradictory attitudes between the claimant and respondents with respect to their rights, are examples of the characteristics of the U.S. legal culture (Hinchey & Perry, 2008). In view of this, the legal culture is closely related to the attitudes of the lawyers, claimants and respondents when dealing with disputes.

Legal culture has been identified as one of the important subjects in socio-legal research (Friedman, 1969; Sarat, 1977). By definition, legal culture according to Friedman (1975) refers to "customs,

opinions, ways of doing and thinking-that bend social forces toward or away from the law". Social forces according to him, "are constantly at work on the law...choosing what parts of law will operate, which parts will not" depend on the society's "judgment about which options are useful or correct" (Friedman, 1975). The society judgement is made through what is thought as legal consciousness which "traces the way in which law is experienced and interpreted by specific individuals as they engage, avoid, or resist the law and legal meanings" (Anonymous, 2001). In other words, legal culture is built upon the legal consciousness of the society members or industry players. Due to its substance, literature (Hertogh, 2004) in the socio-legal research has shown a growing interest in the legal consciousness subjects.

Apart from cultural elements identified above, there are two other elements that make up a working legal system, namely, the structural and substantive elements. The theory which asserts that law is "a system or body of law tied to specific levels or kinds of culture" (Friedman, 1969) suggests that cultural, structural and substantive elements interact with each other, under the influence of external factors; through the responses or demands of the society whose interest are at the particular issue. In this regard, structural elements are "the institutions or mechanisms themselves, the forms they take and the processes that they perform" (Friedman, 1969), while the substantive elements are the laws such as "the rules, doctrines, statutes and...all other rules and decisions

which govern, whatever their formal status” (Friedman, 1969). Thus, in essence, this theory requires a legal researcher to define the relevant society and identify the legal culture within the society consists of values and attitudes in the avoidance and resolution of dispute. This subsequently determines for example, what forms and processes (structural elements) are used and why; which rules (substantive elements) work and which do not, and why (Friedman, 1969).

To further highlight the importance of this theory, a professor in the Department of Building, National University of Singapore has recommended that “a comprehensive research programme is necessary to facilitate the development of appropriate policies and strategies for improving the performance” of the construction industry in developing countries (Ofori, 2011). He suggests that:

It should be acknowledged that the proposals and recommendations to be applied in each country must be country-specific, and take into account of the cultural and resource contexts, as well as the governmental mechanisms and the business networks (Ofori, 2011)

Although the above recommendation may not be considered as something new, it serves as evidence to the growing interest over cultural issues in the construction-dispute related research. For instance, a research has been conducted to look into the behaviour of dispute resolution in the Malaysian construction industry which

affects the selection of dispute resolution methods (Chong & Zin, 2012). Further, a research conducted by Ghada and Jennifer (2012) identifies the culture which affects the choice of dispute resolution methods in international contracts involving contractors based in English-speaking countries who operate in the Middle East or Asia. In this respect, Friedman (1969) illustrates the importance of culture by suggesting that, “there are aspects of law which do codify custom; and probably no law is effective that does not make some use of the culture of its society”.

Thus, having recognised the likelihood relationship between a legal system and culture, it is therefore inappropriate for a country’s decision to adopt a dispute resolution mechanism solely based on the success story of another country that implements it. It has been suggested that culture “defines people’s needs for products and services” (Reisinger, 2009). For instance, cultural issue has in fact been recognised by the law through the instrument of trade usage and custom as an implied term in a contract. This may explain why mediation, albeit has been successfully used and widely accepted by the construction industry in the U.K. and Australia, currently does not really work in Malaysia even though it has been introduced through the standard form contracts published by the Malaysian Institute of Architects since 1998 (Zulhabri *et al.*, 2008).

The above discussions support the need for a country-specific research to be conducted to examine whether a legal

system or mechanism suits a particular industry's legal culture, rather than to simply borrow it from more advanced countries. In addition, Cheung and Suen (2002) believe that "disputes in other geographical locations are different because of differences in social norms and values". This proposition leads to a question whether the legal mechanism developed and tested in advanced countries readily available to be used by a developing country like Malaysia.

Thus, from the epistemological perspective, this study looks at how people interpret the world, focusing on meanings, trying to understand what is happening and developing ideas through induction from data (Easterby-Smith *et al.*, 1991). According to Miles and Huberman (1994), there is a need to define the unit of analysis for a research. The unit of analysis for this qualitative research is the construction industry players or the social reality, which is the phenomenon to be studied with regards to their perceptions on the possibility of introducing DAP for the Malaysian construction industry. The social reality in this research includes several respondents ranging from contractors, clients, construction lawyers, consultants and regulators. This approach has been used in quite a number of previous construction disputes related research, whereby almost similar backgrounds of respondents have been selected for their research (Chan & Tse, 2003; Harmon, 2003b, 2004).

Unlike quantitative research which normally requires the sample to be randomly selected, in qualitative research samples

are more often non-random, purposeful and small in numbers (Merriam, 1998). Interviews have been chosen for this study due to its ability to explore and, acquire lengthy and detailed answers about the issues at hand by entering "the other person's perspective" (Patton, 1987). The number of respondents set to be limited to that experience, expert and prominent professionals by which a small number of interviewees was selected based on a set of criteria. For example, the criteria for the selection of contractors were developed as follows:

- a. The respondents must have a minimum of ten (10) years' experience in the construction industry. This criteria were used in a study conducted by Cheung and Suen (2002);
- b. The respondent must be at least the managing director or project manager of the company, or other persons such as the contract manager who are involved in the business administration and familiar with construction contracts. According to Cheung and Suen (2002), respondents who are very experienced, knowledgeable, possess good skills and hold senior managerial positions in the industry are essential because their views provide a good reflection in the field of research. It is suggested that the respondent's legal backgrounds be taken into account in the current study. This was demonstrated in a study conducted by Rameezdeen and Rajapakse (2007) on the readability of contract clauses,

where the sampling was based on selection of professionals from the industry who are routinely involved in the business of administration and working with construction contracts;

- c. The respondents must be working in a company experienced in both civil engineering, and building works. It is recognisable that construction activities not only involve civil engineering and building works, but may also include activities such as mechanical and electrical works, and other specialised works. However, due to time and cost constraint, it would be difficult for this study to use the entire population in the quest of gaining knowledge about something (Sekaran, 2006). This is also aimed at limiting the scope of the study and to ensure the amount of data is manageable;
- d. The locality of the chosen respondent is from Selangor and Kuala Lumpur. For example, statistic shows that the majority of registered contractors are located in these two major states in Malaysia (CIDB, 2009). In addition, the purpose of choosing the locality of the respondents is to limit the scope of the study and to ensure a manageable amount of data.

The list of interviewees are gathered through the respective Malaysia's professional bodies or authorities such as the Board of Quantity Surveyors (BQSM), the Board of Engineers, the Board of Architects, the Construction Industry Development

Board (CIDB) and the Professional Services Development Corporation (PSDC). In the event if there is no specific list available to choose the potential respondents or difficult to get hold of a respondent, snowball sampling approach will be used through recommendation or referral made by the initial interviewees. In this regard, snowballing sampling is said to be a common approach in the construction research (Abowitz & Toole, 2010).

A semi-structured interview format has been selected for this study, as it allows the interviewee to answer questions on his or her own terms and offers flexibility in the questioning and answering of questions when compared to a highly structured interview (Berg, 2004). The topics and issues to be covered are predetermined in an outline form or interview guide to ensure that each of the interviews conducted seeks the same information from the respondents (Lynch, 1996). An interview guide is prepared which contains questions which were developed based on the research questions as well as based on the key points identified in the literature review.

A complete interview transcript is managed and organised by using NVivo, a software designed for assisting researchers in qualitative data analysis. The use of NVivo 8 software and a complete interview transcript have also been employed for this study primarily to safeguard the validity and reliability of the data as well as its findings. In short, once all the interviews data had been transcribed, systematic processes suggested by Boyatzis (1998),

Guba (1978) and Patton (1987) were utilised to initiate the data analysis process for this study which included, among others, the development of categories in the forms of main themes and sub-themes, management of the categories or themes by looking at the regularities or patterns, and interpret the patterns in a way that contributes to the development of knowledge.

The interview sessions were extended over 2 stages. Firstly, it has been conducted between May to November 2009, covering primarily the consultants (quantity surveyors, engineers and architects). The time taken is considered ample enough to extend invitation to participate in the research to a list of consultants which was identified through purposive sampling. The second stages of the interview sessions were conducted between February to August 2010 to cover the rest of the respondents comprising the lawyers, clients, contractors

(main contractors and sub-contractors) and regulators. The invitation to participate in the research to the list of respondents was sent by post and email, followed by phone calls, whenever necessary, in order to get the response.

THE INTERVIEW RESPONSES

This study attracted 29 interviewees consisting of clients, contractors, consultants, construction lawyers and regulators. Fig.2 indicates the number of interviewees who participated in the interview and their sector of practice. The breakdowns of the nature of practice in descending order are sub-contractors (17.2%), construction lawyers (13.8%), regulators (13.8%), quantity surveying firms (13.8%), public clients (10.3%), main contractors (10.3%), private clients (6.9%), civil and structural engineering firms (6.9%) and architecture firms (6.9%).

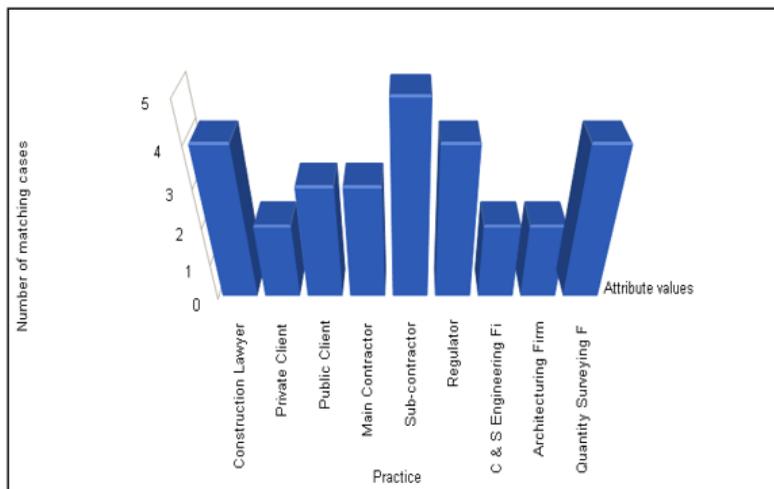


Fig.2: The interviewees' sector of practice

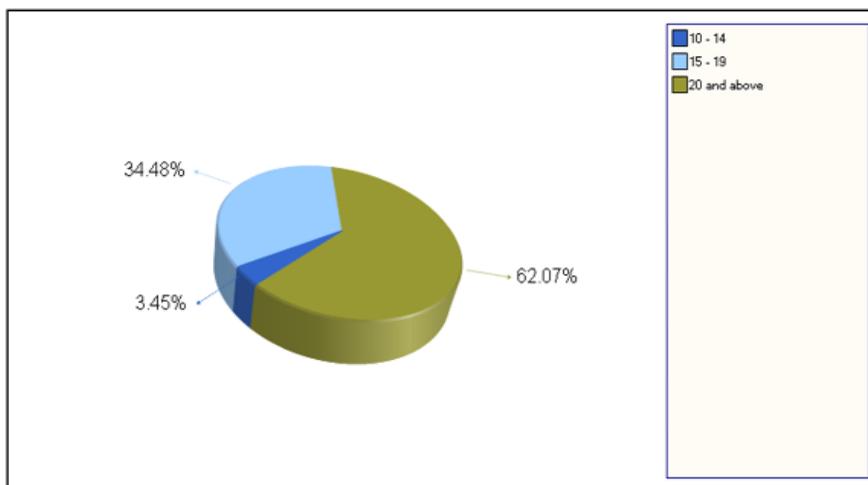


Fig 3: Interviewees' work experience (years)

In this study, majority (62.07%) of the interviewees have experiences ranging from 20 years and above, followed by 34.48% of the interviewees who have work experiences of 15 to 19 years, and 3.45% interviewees with work experiences of 10 to 14 years.

As shown in the above figure, the majority of interviewees have work experiences of more than 20 years. It has to be highlighted that the most experienced interviewees have work experiences of 35 years and 28 years, which included a construction lawyer and sub-contractors, respectively. The interviewees' general background is tabulated in Table 2 for easy reference:

The following are the discussion on the main themes and sub-themes which emerged from the data analysis gathered from the interviews:

RESPONDENTS' PERCEPTIONS ON DAP

The first main theme of the interview analysis is the respondents' perceptions on the possibility of introducing DAP into the Malaysian construction industry. There have been mix reactions among the respondents as to whether DAP should be introduced for the industry. The following are the key sub-themes for the main theme which explain the respondents' perceptions on the possibility of introducing DAP.

Demerits of DAP

Demerits of DAP emerged as one of the key sub-themes which explain the respondents' perceptions on the possibility of introducing DAP. The respondents' feel that although there are merits with DAP, the issue of cost is regarded as one of the stumbling blocks to the idea of having such mechanism in the industry. The following sub-themes reveal the respondents' perceptions on the demerits of DAP which emerged from the interviews:

TABLE 2
Interviewees' Details

No.	Label	Position	Years of Experience	Nature of Practice
1	ConstrLaw/01	Arbitrator	20 and above	Construction Lawyers
2	ConstrLaw/02	Partner	20 and above	Construction Lawyers
3	ConstrLaw/03	Director	15 – 19	Construction Lawyers
4	ConstrLaw/04	Partner	20 and above (35 yrs)	Construction Lawyers
5	MC/01	Senior Manager (Procurement)	15 – 19	Main Contractors
6	MC/02	HOD, Claims Department	15 – 19	Main Contractors
7	MC/03	Project Manager	15 – 19	Main Contractors
8	SC/01	Manager	15 – 19	Sub-Contractors
9	SC/02	Manager	15 – 19	Sub-Contractors
10	SC/03	Manager	15 – 19	Sub-Contractors
11	SC/04	Director	15 – 19	Sub-Contractors
12	SC/05	Director	20 and above (28 yrs)	Sub-Contractors
13	SR/01	Director	20 and above	Quantity Surveying Consultants
14	SR/02	Principal	20 and above	Quantity Surveying Consultants
15	SR/03	Principal	20 and above	Quantity Surveying Consultants
16	SR/04	Project Director	20 and above	Quantity Surveying Consultants
17	IR/01	CEO	20 and above	Civil & Structural Engineering Consultants
18	IR/02	Director	20 and above	Civil & Structural Engineering Consultants
19	AR/01	Principal	20 and above	Architectural Consultants
20	AR/02	Associate	20 and above	Architectural Consultants
21	PubCL/01	Director	20 and above	Public clients
22	PubCL/02	Quantity Surveyor	15 – 19	Public clients
23	PubCL/03	Deputy, Director	20 and above	Public clients
24	PriCL/01	General Manager	20 and above	Private clients
25	PriCL/02	Deputy Senior Manager (Projects)	15 – 19	Private clients
26	Reg/01	Managerial level	20 and above	Regulators
27	Reg/02	Manager	10 – 14	Regulators
28	Reg/03	Director	20 and above	Regulators
29	Reg/04	Managerial level	20 and above	Regulators

(a) Cost

Since DAP is a new concept for the industry, cost becomes an important issue of concern among the industry players. It is understandable since DAP must be established at an early stage even before physical work on site begins, the main industry players' concern is that, the construction cost is going to be increased which in turn among others, might have an effect on the contractor's margin. Further, it also depends on whether the DAP cost can be rationally accepted as an additional cost to the project, and anticipation that at the end of the day, both parties may spend the money without actually having any serious dispute.

Let say I am the main contractor who haven't had a project with DAP, first thing I will ask is how much the cost is for the whole project?...So let say if at the first place there is no cost indicated...difficult to judge whether I want to apply or not this kind of system. (SC/03)

...indeed having independent person on a full time basis won't help. One, it is an added cost. Two, just getting them to come to the meeting. What happen if there is no dispute? You are just wasting resources, time, and money for people just come to the meeting to have an understanding of the

issues.... is it worthwhile doing that? ... I think cost is the issue, I think, the margin are so tight. I can think even further, you know so many problems are happening in the industry. The margin are so tight, you are not going to pay them well. And when you don't pay them well, another issue of corruption comes in. You are inviting all that. So I think the industry is not ready for that. (SR/04)

Again at the end of the day, the cost benefit issue is a decisive issue because you might be only paying someone without having any dispute. (ConstrLaw/02)

However, it is interesting to highlight that a respondent who has experienced with DRB (a mechanisms of DAP) in India suggests that the cost of DRB is not really a significant issue because it all depends on how the contract is drafted, in relation to the appointment and procedure of DRB.

That's why I say that the cost is not really a significant issue, from my experience. It all depends on how you draft the contract. If you put in your contract, your DRB members are to be provided with first class ticket to fly, the cost depends on how you draft the contract. (MC/03)

(b) Not really necessary for sub-contractor

A construction lawyer, main contractor and quantity surveyor suggest that DAP should be applied for sub-contracting works as well. For example:

For construction, I think yes. I would say yes because it can go at any level of construction. I would say that it would be sad if it is not available in small contract. It should have. Although it would cost a little bit more. I would say some big giant contractors, the way they treat their smaller sub-contractor, is not right, you should have some system for everything to be fair. (MC/03)

However, a sub-contractor perceives the DAP process as presumptively biased since the selection and appointment of the DAP board's members usually involves only the main contracting parties, namely, the client and the main contractor.

The so called board is actually engaged by the main contractor. So as a sub-contractor we will think of it more on bias, when they try to settle the dispute, it may be some kind of bias, correct or not, because it is selected by the main contractor. Could it be? It is a perception. Whether it is true or not, I don't know. (SC/02)

Apart from the issue of bias, the involvement of so many sub-contractors in a project may make it difficult to establish DAP for sub-contracting works.

Very difficult, because there are so many sub-contractors who maybe affecting his performance also.... sub-contractor A maybe having issues because of sub-contractor B.... I don't think it is going to work! It is going to be quite difficult! (PriCL/01)

Normally if there is a dispute, you will not have to see everybody.... Normally you deal with them one to one. So I don't think sub-contractors level needs that. (SC/01)

In addition, a sub-contractor observes that the nature of sub-contracting work is usually limited for certain elements of work and therefore, is normally short in duration.

Sub-contractors sometime they are not involved in all buildings elements. Sometimes they might only be involved in the structure, after structure they move away, and then other sub-contractor is coming.... (SC/03)

(c) Not really necessary for all type of contracts

Apart from the issues of cost and the notion of presumptively biased, a contractor has

observed that DAP may not be necessary for a contract based on bill of quantities (BQ). Contracts based on BQ are said to be easier to handle since all elements are itemised and quantified to make the scope of work clearer.

For conventional what much can you dispute when you have everything in the BQ, what else you want to dispute. You trust for what being written in the BQ. Those not in the BQ you can claim. (MC/01)

A public client suggests that DAP may not be viable for a small local government's work contract because the scale of works is usually not too big.

...big local authority perhaps they can afford. But if the Sabak Bernam District Council or Labis District Council, it ends there only. For us, we are also not that big. (PubCL/01)

The following presents viability of DAP as another key sub-theme which explains the respondents' perceptions on the possibility of introducing DAP.

Viability of DAP

In contrast to the demerits of DAP, the interview findings have also captured the viability of DAP as another key sub-theme, which explains the respondents' perceptions on the possibility of introducing DAP. The following are the sub-themes emerged from the interviews which revealed the respondents' perceptions on the viability of DAP:

(a) For complicated project

Although most of the respondents suggest the cost of projects play a significant role in deciding whether it merits the use of DAP, respondents ranging from a construction lawyer, public client and quantity surveyors proposed that DAP could be suitable for complicated projects because the likelihood of dispute incidences is much higher.

No, only for the big one with certain complexity involve, not for the small one. (ConstrLaw/01)

If me, it depends on the project. How complicated the project. If the project complicated, we can take it. (PubCL/02)

Should be again depending on the complexity of the project.... You can yes, simply appoint DAP once it (the contract) was awarded.... (SR/03)

In this regards, a costly project is not necessarily complicated in nature. A quantity surveyor offers an explanation on what it means with project that is complicated in nature, whereby, it is related to a project which is so "unique" in terms of its design, identities and usage, and he named the completed Sepang Formula One Circuit project as such an example of a "landmark project". He illustrates this in the following statement:

...actually most dispute arise on mega projects...infrastructure, utilities, and unique projects... landmark projects. When you have landmark projects, then you know the parties may not be familiar. I mean like Formula 1 race course, complicated project. Those days, schools, college, hospitals, are supposed to be complex, but nowadays people called hospitals are quite common....anyway, it's good to have this mechanism in place, but like I say, it also depends on the types of projects, complexity of projects. (SR/01)

(b) Involvement of foreign party

A construction lawyer, two main contractors, a quantity surveyor and a regulator suggested that DAP is viable if it involves a foreign party such as the “international party” or “foreign contractors”.

Not much will agree to that, because you have to maintain that board for the whole project....For a multibillion project and involve international party may be yes. (Interviewee MC/01)

It's good to have avoidance but then...in the local context, we may not come to that situation... where I think it involves foreign contractors...then this dispute avoidance may be helpful. (SR/01)

Now, whether it is practical in the light of the Malaysian culture. I don't know whether it would be favourable for the Malaysian contractors to adopt it. If you talked about contractor Leighton who is an international contractor, probably Leighton Australia uses that kind of practice and they feel that it is necessary and they want to adopt it here. (Reg/02)

Further, a construction lawyer advocates that DAB (one of the current mechanisms of DAP) is viable for projects involving international contractors because they may have experienced some exposure with the mechanism through the FIDIC forms of contract.

For me it's very effective because it attempts to address the issue before it escalates, especially you know FIDIC is an international contract form, normally between Japanese and European. So this board plays an active role because the parties have the confidence on this board and will appreciate its existence. (ConstrLaw/03)

The following section presents the second main theme which captures the cultural issues related to the industry practice in dealing with dispute:

CULTURAL ISSUES RELATED TO THE INDUSTRY PRACTICE IN DEALING WITH DISPUTE

Another main theme observed in this study is the cultural issues. Indeed, this study allows a researcher to identify the legal culture within the society consisting of values and attitudes in the avoidance and resolution of dispute, which may subsequently determine, among other, what forms and processes (structural elements) are used and why (Friedman, 1969). The following are the cultural aspects related to the industry practice in avoiding dispute:

Discussion and negotiation

Generally, the industry players prefer to discuss and negotiate settlement in the event if dispute arises between them. The following sub-themes explain the nature and why they prefer this sort of practice:

(a) Without the involvement of an external party

The parties normally prefer to discuss and negotiate settlement among themselves, if dispute arises, rather than to get the involvement of an external party.

I think people don't want to go out of the players in the contract and bring out this case through someone else. I think people prefer to keep within that circle of players.
(AR/01)

...they will sit down and will try to discuss, and try to see whether or not they can solve the problem because nobody wants to go for arbitration. They know that it is very, very expensive and it is a lot of paper work. They normally don't want to bring in their lawyers.
(Reg/02)

I think the more the parties talked during the course of the project, there will be more avoidance on dispute. Interaction helps. And it need not be formal, informal helps! And that is something that should encourage. That is the culture it should. (ConstrLaw/04)

(b) Give and take

The interviewees perceived that the parties normally prefer to avoid overly confrontation and prepare to give and take in their dealing with dispute.

I think it is a Malaysian way, to try, not to be overly confrontational. Trying to resolve it and in most cases it works, give and take you know. (PriCL/01)

...if the dispute is very simple not even affected our progress of work, we will go for a zero cost. So we give and take with the client.
(MC/01)

Apart from discussion and negotiation, this study also identifies top management involvement as another key sub-theme for the main-theme on cultural issues related to the the industry practice in dealing with dispute.

Top management involvement

The top management involvement in the negotiation of dispute between both parties emerges as one of the key sub-themes for the main-theme on culture related to the industry practice. In this regard, the interview findings show that the top management involvement is primarily without the involvement of any third parties. Presently, the top management involvement exists in the following ways:

(a) Decision makers' involvement

Interestingly, the industry players reveal that a decision maker's involvement is required to effectively handle and resolve dispute between the parties. The most essential criteria are that ideally decision makers must not be directly involved in the management of the project to enable them to identify any mistakes done on their side and to examine the attitudes of their operational staff, rather than to merely pin point any mistakes on the other party. Moreover, they must have the financial authority to decide on the quantum or monetary matters. Another interesting point is that ideally the person to represent the party must be identified and named by each party in the earlier stage of the project. The following quotes explain the existence of such mechanisms in the industry:

What they have in their contract is the mechanism where they call 'project control group meeting' (PCG). So in this PCG meeting each one nominate a decision maker,... who can make decision and act on each party's behalf....to me actually the whole PCG work very well because the parties whenever there was a dispute, it was addressed monthly....It was the contractor's responsibility to table out the main issues, because it was a design and build contract. Maybe there may not occur in traditional contract, but I think some of the thing you still can impose. They were required to give a time line, whether there is any delay, what is the cause of delay, is there anything that the employer is doing that is delaying their work, then the employer would also have various issues on grievances they could bring up to the contractor. All these are within the framework of D&B contract. But it work quite well because I think both parties were bit matured. (SR/04)

For example, KLCC [Developer of Kuala Lumpur City Centre] they do that. As an employer, they do that...They will tell the contractor you nominate one person....They involved in the project but they are not day to day, you know. They are little far away. So that, they can be

a bit dispassionate, you know!.... When you are in the project, you, you can't, you know, you can't be very objective about it.... Oh, this one is higher than Project Managers, because they have financial authority. (ConstrLaw/04)

MD [Managing Director] they normally they won't go in detail, but they know about the works, we will explain, present to them in certain method or explanation. Normally in the construction industry, the MD will know better how many works around in the company, he will know 50% in detail because he involves in the decision making, operation. (MC/01)

We have meetings with CEO's, two CEO's meet, close meeting then come to some understanding.... ideally it should be people who are not, associated with the project. That's very important, because if they high associated, they can't help that... (PriCL/01)

(b) Self-monitoring system

Finally, the interview results reveal a practice where top management is also involved in the resolution of dispute through a self-monitoring system established by one of the parties to a contract. Basically, self-monitoring is done from headquarters by

those who are very senior and experienced, but they are not directly involved in the project. They look at how the work is being done and they quickly handle the operational issues in order to avoid problems that can become disputes at a later stage. The interview findings reveal that the self-monitoring system has been practiced by a contractor and regulatory body under a ministry.

Like we at the HQ, we monitor supervisor at site. They might not know what is the work all about? But we at the HQ, when we see what they did are wrong, at least we know because we have a comparison of many examples from other supervisors. When you are in the operation, you are concentrating on that particular works, when you are somewhere outside, you are monitoring in general, you can compare. You have ten supervisors, everybody having different job scope, attitude and different method of work. But you can foresee something, not to say that is wrongly done. But may be the method is not accurate enough. There is another method that is better which has been done by somebody else, proven better and then we can tell them... (MC/01)

...at my level...I have this Development Committee. This one I will do it once in two weeks,

you know! I will monitor all the progress of the projects that are being implemented on the ground [by various agencies under the ministry]and then on top of that, there is another level...Ministry Development Committee...that is done once a month. You see! So, we actually monitor very closely what is happening to the projects. (Reg/04)

ANALYSIS OF THE FINDINGS

Fig.4 presents the summary of interview findings. The findings on the interviewees' perceptions about the future of DAP or potential of introducing DAP demonstrate the circumstances where the current mechanisms of DAP may be viable. In essence, the cultural issues reveal the culture and trade usage of the industry players when they seek to avoid disputes, which consequently assist in the formulation of the structural elements for a viable DAP mechanism.

The following sub-headings present the analysis of the findings:

The viability of the existing DAP mechanisms

The interview findings show that the industry players perceive that the existing mechanisms of DAP are generally not readily viable for the Malaysian construction industry due to the issue of costs; not really necessary for sub-contractors; and not really necessary for all type of

contracts. In addition, both the literature and interview results reveal that the issue of costs is one of the stumbling blocks to the introduction of the existing mechanisms of DAP. Nevertheless, the respondent who has experience with DAP suggests that the cost of DAP is manageable provided that economic consideration is given an utmost priority in the designing of the term of reference and procedure of DAP. If this can be effectively done, DAP may become a viable option to avoid and resolve construction disputes regardless of the cost and the nature of project.

The above suggestion is also consistent with an observation made by Gerber (1999) that like other dispute resolutions, how costly such mechanism is, it still depends on a number of factors such as "the duration of the project, the number of disputes and the complexity of such disputes". Further, the interviewees perceive that the existing DAP mechanisms are viable for a complicated project and with the involvement of foreign party because of the likelihood of dispute incidences. Figure 5 summarises the viability of the existing mechanisms of DAP based on the perceptions of the industry players.

The following section discusses the cultural issues which have been identified in this study. It reveals the legal culture and trade usage of the industry players pertaining to their shared behaviour or practices when dealing with dispute, especially in attempting to effectively avoid and resolve construction dispute.

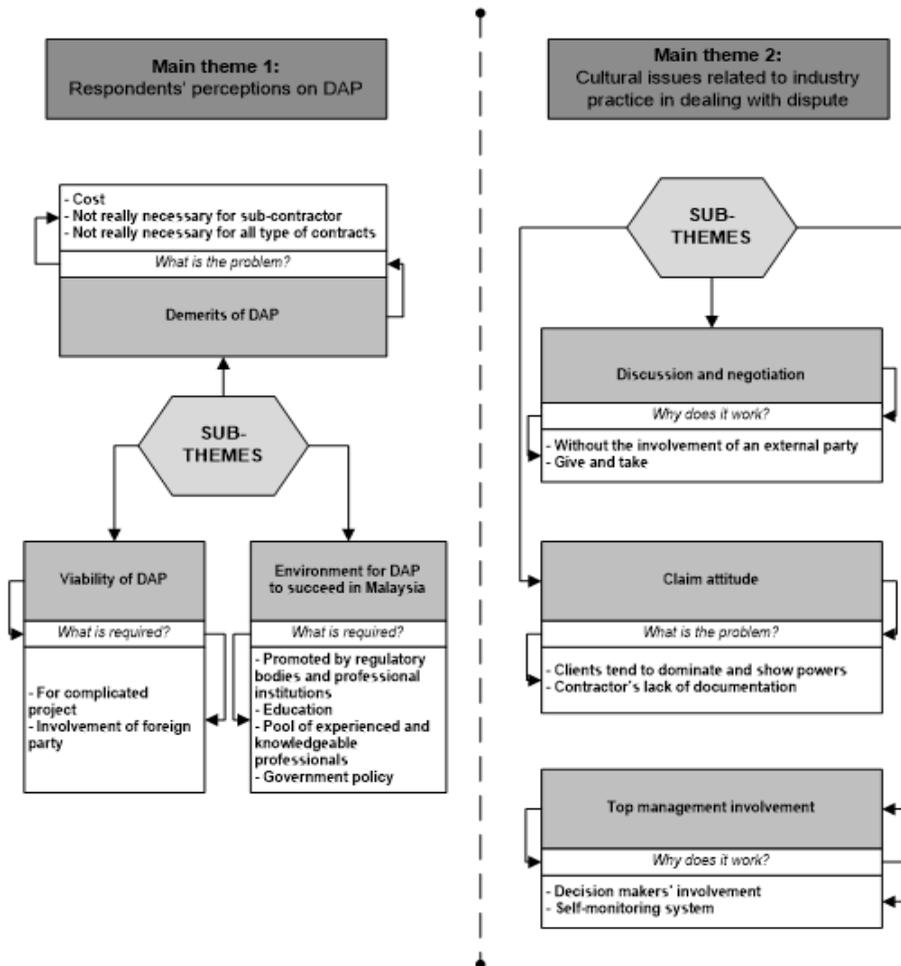


Fig. 4: Summary of the interview findings

Cultural issues related to industry practice

In essence, the culture and trade usage identified in this study help to formulate a viable DAP mechanism for the Malaysian construction industry. The two important cultural issues are discussion and negotiation, and involvement of top management. The following sub-sections present the cultural issues that help to form the structural elements of a more viable DAP mechanism for the Malaysian construction industry.

(a) Discussion and negotiation

The interview results show why the industry players prefer using the processes of discussing and negotiating within the parties rather than bringing the dispute to a third party. The culture to discuss and negotiate can be considered as another legal consciousness which leads to the legal culture of trying to “avoid ADR and litigation”, as identified by Mohd Danuri *et al.* (2012). The culture of discussion and negotiation also shows the industry

players' wisdom to avoid from being overly confrontational and endeavour to avoid any disagreement from escalating into a full blown dispute. In particular, this culture is reasonably in line with the philosophy of DAP. Thus, the DAP concept fits in well with the culture of the construction industry. Nevertheless, a modification to the current mechanism of DAP is needed, by taking into consideration the following trade usage which has been identified in this study, in order to make DAP a viable mechanism for the Malaysian construction industry.

(b) Involvement of the top management

The involvement of the top management of the parties can be considered as the industry trade usage to achieve a successful discussion and negotiation process, in an attempt to avoid dispute without the involvement of third parties. This study reveals that the involvement of the top management have been successfully used in the discussion and negotiation process because it involves a decision maker or a person with financial authority who are not directly involved in the day to day operations of the project. In short, this so-called trade

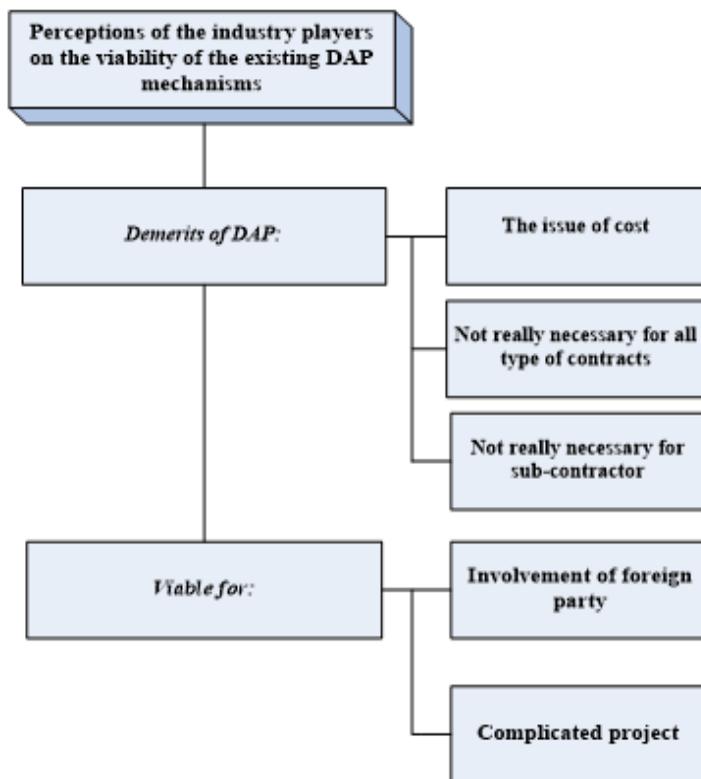


Fig.5: Viability of the existing mechanisms of DAP

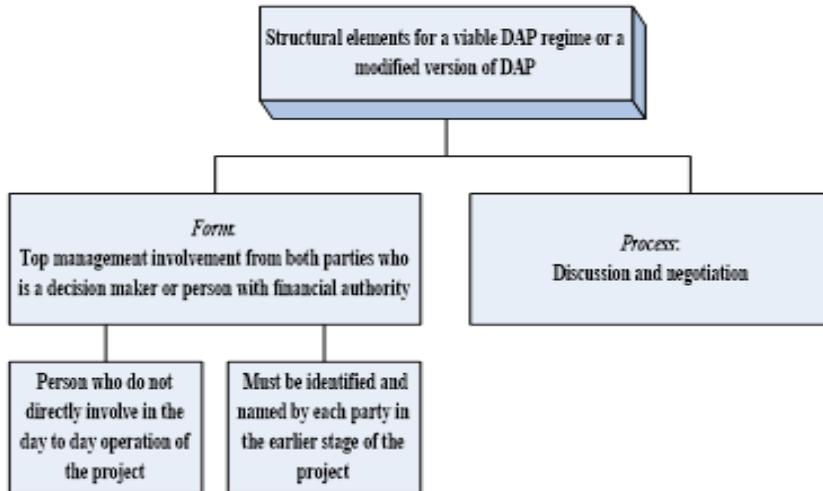


Fig.6: Structural elements for a viable DAP mechanism

usage infuses the much needed elements for an effective and successful discussion and negotiation, for the purpose of avoiding the disagreement from becoming a full blown dispute.

Here, the findings are further interpreted by using the theoretical position that a legal system is tied to specific types of culture which will subsequently determine the structural and substantive elements of a workable legal system (Friedman, 1969). In respect of the structural elements, it is suggested that a viable legal framework of DAP can be introduced with the involvement of the top management of both parties. Ideally, such persons who represent the top management must be identified and named by each party in the earlier stage of the project. However, the persons must not be directly involved in the day to day operation of the project. Further, it is suggested that the DAP process should be concluded through

discussion and negotiations between the top management of both parties. Fig.6 summarises the structural elements for a viable DAP mechanism.

In addition, by suggesting the above structural elements, the issue relating to cost in the existing DAP mechanisms (refer to Fig.5), which has been the cause of concern among the industry players can adequately be dealt with, since this suggested mechanism does not involve any third parties. The contracting parties' direct involvement in the discussion and negotiation of any disagreement or conflict that may arise will help reduce the costs involved in engaging a third party to assist. Furthermore, Fig.6 seems to suggest that compared to the existing DAP mechanisms, the suggested structural elements for a viable DAP mechanism should also be suitable for both, any types of contracts and sub-contracting works (refer to Fig.5).

CONCLUSION

In essence, this study explores the viability of DAP as part of a non-escalation mechanism, as an alternative to the existing dispute resolution procedures in the Malaysian construction industry. It shows that the existing DAP mechanism is not presently viable as it is for the local construction industry. Indeed, this study enables a viable DAP mechanism to be formulated by using the theoretical position that a legal system is tied to specific kinds of culture which subsequently determine, the structural elements of a workable legal system.

Since literatures have shown that the construction industry reportedly has not only embraced ADR but also spearheaded the development of innovative forms of conflict management or dispute avoidance, the likelihood is that Malaysia too may head towards such a conflict management or dispute avoidance mechanism in the future. In essence, the findings of this study reveal that the legal mechanism developed and tested in advanced countries is not readily available to be used by a developing country like Malaysia. This study also confirms that a country-specific research must be conducted to examine whether a legal system or mechanism suits a particular industry's legal culture, rather than simply borrowing it from more advanced countries. Finally, it is suggested that legal reform is required to accommodate and support the formulation of DAP mechanism within the Malaysian construction industry.

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The Effects of Receptive and Productive Task-based Listening Activities on the Listening Ability of Iranian EFL Learners at Different Proficiency Levels

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ABSTRACT

As a demanding language skill, listening is frequently underestimated by students and educators in the field of second language learning because effective listening skills are developed over time with lots of practice but listening practices are limited and the activities are either decontextualised or inappropriate for students of a particular proficiency level. In an attempt to incorporate more communicative listening activities appropriate for different proficiency levels, this study integrated Task-Based Language Teaching (TBLT) approach to: 1) investigate the overall effect of task-based listening activities on Iranian EFL learners' listening ability, and 2) identify the extent to which receptive and productive listening task types correspond with a particular language proficiency level. The participants were 90 Iranian language learners in three intermediate, upper-intermediate, and advanced proficiency levels. Different receptive and productive task types were practiced in all the classes. Then, the learners were pre-tested and post-tested on a task-based test of listening comprehension. Descriptive statistics and several paired and independent t-tests were run to analyse the collected data. The findings of the study showed that students at all proficiency levels outperformed in their posttests compared to their pretests. Concerning the correspondence between the listening tasks and proficiency levels, students at all three

levels of proficiency outperformed in their posttest compared to their pretest in both the receptive and productive listening tasks, except for the intermediate group whose improvement was not significant in the productive tasks. The study yielded some useful implications for language instructors,

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encouraging them to incorporate the TBLT in their classes and assign more appropriate task types for different proficiency levels.

Keywords: Task-based Language Teaching (TBLT), listening comprehension, task types, proficiency level.

INTRODUCTION

Many listening classes, particularly in Asian contexts, still heavily rely on de-contextualized listening activities which are not meaningful enough to motivate and enhance students' listening abilities. This reliance may stem from the fact that listening is considered a passive skill and it seems sufficient to expose learners to the spoken language to improve their listening skills (Carter & Nunan, 2001). This view has also resulted in incorporating mainly the receptive listening activities than the productive ones which are more communicative.

Besides, there are controversies about what listening activities should include. Some researchers (Dunkel, 1986) believe that listening activities should require learners to demonstrate their listening skills rather than reading, writing, or speaking, while others (Brown, 2011; Field, 2008) encourage an integrated approach which promotes simultaneous use of listening, speaking, reading and writing throughout the listening process. A main reason is the change of focus in teaching methodology. During the 1950s and 1960s, audiolingualism encouraged memorisation of new language concepts presented through scripted audio

texts which prepared learners for lecture listening rather than spontaneous, real-life, interactive listening experiences. With the rise of more communicative approaches in 1970s and 1980s, the use of more authentic 'real life' contexts became popular. More recently, the use of only authentic materials was replaced with integrated models mainly as task-based instruction (Brown, 2011; Field, 2008).

Since the introduction of Task-based Language Teaching (TBLT), which is also known as task-based instruction (TBI), into the field of language teaching and learning by Prabhu (1987), listening is considered as an active skill and the listening activities have been modified and turned into more communicative and meaningful ones. TBLT is an approach to teaching which centres on the use of meaningful real-life tasks by means of the target language. In other words, unlike the traditional activities designed with the purpose of teaching a discrete pedagogical point and neglected the authenticity and real-life situations (Izadpanah, 2010), the use of language in the TBLT is the main reason for applying more communicative tasks in meaningful contexts, which consequently have a significant influence on learning outcomes (Prabhu, 1987; Richards & Rodgers, 2001).

According to TBLT (Nunan, 2004), any task must involve three stages, which include: 1) pre-task stage (the introduction to the topic and to the task); 2) during the task stage (the completion of the task depending on the type of activity); and 3) language focus stage (reviewing the task and

highlighting relevant parts for the students to analyse). This is true for all language skills and, specifically, listening which is the focus of the present study because “full engagement in the listening process requires L2 listeners to activate their schema by setting a purpose or identifying specific tasks that will help them to maximise comprehension before, during, and after listening” (Schweppe, 2012, pp. 10-11).

It has been suggested that the IELTS listening activities are task-based and have most of the characteristics of real-life tasks, given the notion of ‘task’ explained above. Thus, in what follows, the IELTS listening task types which are both receptive and productive, as well as their underlying purposes are presented:

1. *Matching*: this listening task requires learners to listen to a text and then match a numbered list of items with a set of options.

Purpose: to evaluate how well learners can listen to details.

2. *Labelling*: this listening task requires learners to select the labels from a list which best matches the blank parts of a visual task (Dunkel, 1986).

Purpose: to assess students’ ability to understand descriptions of a place which usually includes spatial- and direction-related expressions such as opposite to, in front of, etc.

3. *Form-filling*: this listening task requires learners to listen to a text and complete the information requested.

Purpose: to evaluate a learners’ ability to recognize relationships and details.

4. *Selecting (multiple choice)*: this listening task requires learners to listen to a text and answer some questions each with 3-4 choices.

Purpose: to check learners’ detailed or general understanding of the main points of the listening text and their ability to answer some questions.

5. *Sentence completion*: this listening task requires learners to listen to a set of sentences which summarise the key information of the text and complete a gap in each sentence using information from the listening text.

Purpose: to gauge learners’ ability to focus on the main points of the text.

6. *Summary completion*: this listening task requires learners to complete a summary which contains a number of gaps.

Purpose: to evaluate learners’ understanding of the overall meaning and main points of the section summarised.

7. *Short-answer questions*: this listening task requires learners to listen to a text and read a set of related questions to which they have to write a short answer.

Purpose: to evaluate learners’ ability to listen for concrete facts such as places or times.

Here, a distinction should be made between receptive and productive listening

activities. The first four task types are referred to as receptive because they assess understanding when one listens or reads. On the other hand, the next three question types are called productive skills and they assess students' understanding and interpretation and are, thus, more demanding.

Previous literature shows that a few studies have investigated the effects of task types on listening comprehension. It also indicates that most of the studies have centred too much on listening product but too little on listening process (Field, 1998). Some studies have concentrated on the skills and strategies involved in listening (Field, 1998). Others have paid attention to factors that lead to success in listening comprehension tasks. Nonetheless, the effects of learners' level of linguistic and lexical knowledge on listening comprehension achievement have also been studied (Anderson, 2009; Kurita, 2012; Stahr, 2009). In what follows, some of the main studies conducted in both Iranian and other educational contexts are reviewed.

Some studies have found that listening support in tasks can enhance learners' listening comprehension at different proficiency levels. Chang and Read (2006) investigated the effects of four types of listening support, i.e., previewing the test questions, repetition of the input, providing background knowledge about the topic, and vocabulary instruction, to reduce the demands of the task for students in a classroom-based experiment in Taiwan and found that providing information about the topic and repetition of the input as the most effective type of support, while vocabulary

instruction was the least useful form of support. The learners' level of listening proficiency was found to have a significant interaction effect, particularly in the case of question preview.

Following her previous study (2008), Chang (2009) examined 75 Chinese EFL learners' test-taking strategies in different tasks and their relationship with listening performance. The results showed that all students, regardless of their listening proficiency, favoured particular strategies which differed little in the frequency but greatly in the preferential order, and how they were utilised. Also, they were able to adjust their strategy use according to the change in task conditions. However, as explained, students' strategy use in this study was affected not only by task type but also by test type, so the choice of strategy has a multidimensional facet and cannot merely be attributed to the task-based instruction, and this is one of the main difficulties of task-based strategy assessment.

A more related strand of study, closely associated with the aims of the present study, examines the impacts of task-based activities on listening ability. Bahrami (2010) investigated the influence of task-based activities including matching, form-filling, labelling and selecting on listening ability among EFL students to identify any possible correspondence between task type and students' language proficiency level. Based on the findings of the study, a significant relationship was observed between matching, labelling, and form-filling tasks and listening comprehension.

However, there was no relationship between selecting and listening comprehension because selecting task did not correspond with any of the language proficiency levels.

Nasirian (2012) conducted the same study using 45 EFL students but found somehow different results. There was a significant relationship between listening ability and all four listening tasks. In addition, it was found that learners with advanced and lower intermediate proficiency levels performed better in labelling, selection and matching tasks, whereas only learners with upper-intermediate proficiency level performed well on the matching task.

However, it is worth mentioning that both Bahrami's (2010) and Nasirian's (2012) studies were limited in scope and suffered from some limitations. Nasirian's (2012) study only examined the effects of task type on listening ability of the male language learners, thus conducting this experiment to females or mixed classes might lead to different results. Also, it used correlational analysis as the only method to analyse the data. More importantly, both Nasirian's and Bahrami's studies merely examined the receptive listening tasks such as labelling and left the productive listening tasks like sentence completion uninvestigated. Above all, although both studies had relatively the same underlying goals, they resulted in somehow different outcomes that limits the generalizability of their findings to the other contexts. This necessitates conducting more studies in this area to obtain more accurate results.

Schwepe (2012) tried to determine whether a 'task-based approach' to L2 listening instruction with explicit instruction on meta-cognitive strategies would enhance learners' listening comprehension of science content and enable them to perform concrete tasks throughout the listening process. The findings of her study highlighted the positive effect of integrated models such as task-based instruction on learners' learning. She found that meta-cognitive awareness increased in task-based models leading learners to continue listening to what they heard even when they did not understand. Nevertheless, the task-based instruction implemented in this study is highly generalised, thus, failing to account for individual differences. In addition, the very short length of the study (two-week span) sheds doubt on the effectiveness of this instruction in the long run.

Farrokhi and Modarres (2012) studied the extent to which two pre-task listening activities, i.e. glossary of unknown vocabulary items and content related support, assisted listening comprehension performance of 120 EFL language learners at low proficiency (LP) and high proficiency (HP) levels. Results showed that at low proficiency level, the vocabulary group outperformed both content and control groups, while in the high proficiency level, the content group outperformed the two other groups. This study suggested incorporating pre-task activities due to the demanding nature of listening and various listening activities across different proficiency levels. However, few factors

such as time seemed to have influenced the results because the extra preparation time given to the learners with low proficiency enabled them to process and internalise the lexical items.

Motallebzadeh (2013) explored the role of task-based listening activities in improving 50 Iranian EFL learners' listening self-efficacy. The results of the study indicated that the experimental group receiving task-based listening activities during the 19 sessions (30 minutes) of instructions reached a significantly higher self-efficacy than the control group receiving the traditional question-and-answer practices. Nevertheless, the findings of this study were only based on the data obtained from the self-efficacy questionnaire and needed to be triangulated with other methods of data analysis to reach more reliable results.

In a recent study, Sarani *et al.* (2014) studied the effect of video-based tasks in improving the Iranian pre-intermediate EFL learners' listening comprehension ability, whereas the experimental group was taught by a course of instruction including video tasks, and the control group was directed by a course including audio materials. The results showed that using the video-based tasks, the experimental group could realize and understand the authentic language more effectively. However, the researcher did not provide any examples of the listening tasks in the experimental group to see how they differed from the tasks in the control group. Moreover, as this is a rare line of research, it should be put under more investigation.

The review of literature shows that despite the increasing concerns about making listening activities more communicative and incorporating more real-life tasks, listening is still the least studied modality (Brown, 2011; Ferris & Tagg, 1996) compared to other skills and very few studies have addressed the effects of different listening tasks and their effects on learners' listening comprehension ability specifically at different proficiency levels (Ellis, 2003). Although the studies reviewed here have incorporated task-based activities (Bahrami, 2010), they are limited in their scope, theoretical foundation, methodology and the tasks incorporated; therefore, the results should be used with caution. Above all, the correspondence between productive listening tasks and learners' proficiency level has not been the subject of any of previous studies.

To bridge these gaps, the present study was set out to investigate the overall effects of task-based listening activities among Iranian EFL students. It specifically studied the influence of different types of listening tasks among students with different proficiency levels. Simply put, attempt was made to answer to the following questions:

Research Questions

1. Do task-based listening activities have any effect on Iranian EFL learners' overall listening ability?
2. Do receptive and productive listening task types have any correspondences with a particular language proficiency level?

Based on the above research question, the following null hypotheses were posed:

H₁ = Task-based listening activities do not have any effect on Iranian EFL learners' overall listening ability.

H₂ = Receptive and productive task types do not have any correspondences with a particular language proficiency level.

METHODOLOGY

Participants

The participants were selected from a population of 105 EFL language learners registered for IELTS courses at Jahad-e Daneshgahi Language Centre in Shiraz, Iran. They were chosen through availability sampling. The demographic information of the participants is presented in Table 1.

TABLE 1
Demographic information of the participants

Number	90
Sex	Male & female
Age	19-26
First language	Farsi

The participants had studied English at different language institutes for eight semesters or so; thus, they could easily follow the listening procedures of the present study. The participants were placed in three proficiency levels: intermediate, upper-intermediate, and advanced, each containing 30 students, for the new semester based on their scores in the Oxford Placement Test (OPT) test. The lower-intermediate group

was excluded from the study as, unlike the other groups, it consisted of 15 students and this could negatively affect the results.

Instrument

Oxford Placement Test (OPT)

The Oxford Placement Test was used in this study to enable the researchers to evaluate the learners' language proficiency level and place them in the right proficiency level. This test consists of two parts. First, the listening part which involves 100 items is taken from authentic situations. Students listen to the conversations spoken by native speakers at normal speaking speed and make their choices on the basis of what they hear. Listening is played only once. Students must complete the test in 10-12 minutes. Second, the grammar test consists of 100 multiple-choice items examining a range of grammatical and lexical items which are contextualised situationally or linguistically. This test takes 50 minutes to complete. The choice of this instrument is that not only does it test grammar and vocabulary, but it also tests how learners use that knowledge in order to understand the meaning in communication.

Pretest and Posttest

Pretest is a task-based test of listening comprehension developed by Cameron (2000) including four productive listening task types, namely, labelling, selecting, matching, and form filling. A parallel form of the test is also developed to serve as a posttest. The right/wrong scoring

procedure is used for the four receptive tasks. A response receives a score of ‘0’ for ‘wrong’ and ‘1’ for ‘correct’. On the other hand, given that productive listening tasks, namely, sentence-completion, summary completion, and short-answer questions require students to briefly write the answers (usually within a 3-word limit), the scoring is more subjective. However, to assure reliability, the answers are checked by two proficient scorers. A response receives a score of ‘0’ for ‘unacceptable’ and ‘1’ for ‘acceptable’. In this study, the inter-rater relationship between the two sets of scores scored by the two scorers was 98% and thus was highly reliable.

DATA COLLECTION PROCEDURE

At the beginning of the term, OPT was administered and 90 language learners were placed in three intermediate, upper-intermediate, and advanced proficiency levels based on their scores in this test (Table 2).

TABLE 2
Placement of the learners at different proficiency levels according to their scores in OPT

Proficiency level	Score
advanced	+ 0.5 SD or more above the mean
upper-intermediate	+ 0.5 SD above and - 0.5 SD below the mean
intermediate	0.5 to -1 SD below the mean

During the course of the term (11 weeks), different IELTS listening task types were practiced in all the classes. All the classes were taught by the same instructor. The

learners were briefed about the usefulness of task-based activities; however, they were not informed about the purpose of the study. The materials selected for each proficiency level included all seven receptive and productive task-based listening activities which were authentic and the difficulty level of the tasks differed to make them suitable for a particular proficiency level (Scrivener, 1994). The difficulty level of the listening was determined via Fog readability formula (Farhady *et al.*, 2000, p. 282).

In the first four listening tasks called receptive tasks, the learners only needed to comprehend and perceive them and check the correct choice in their answer sheets. On the other hand, the three remaining tasks, referred to as productive listening tasks, required the learners not only to comprehend the listening but also to produce and write the correct answer themselves rather than simply reading through a list of choices and checking the correct choice. The listening task types were sequenced by their complexity (Ellis, 2003) and played only once. The strategies devised for pre-listening, while-listening, and post-listening tasks (Table 3) were primarily taken from Cameron (2000):

At the end of the course, a posttest, a parallel form of the pretest, was administered to all the classes with the same procedure as the pretest.

TABLE 3
Strategies used for implementing the listening tasks

Pre-listening	While-listening	Post-listening
a. Read the question(s).	a. Listen carefully to any taped instructions for each section.	a. Transfer you answers to the answer sheet in pencil
b. Check whether you have to write your answer, and in what form (a name, a number, a tick or a cross, a phrase, circle the correct answer, etc.).	b. Focus on more than one question at a time.	b. Pay attention to lower case and capital letters.
c. Predict the content of what you will hear.	c. Do not stop on an answer you do not know: move on.	c. Attempt all questions and do not leave any question unanswered even if you are not sure about the answer.
d. Anticipate the words and phrases you are most likely to hear.	d. Listen for the specific information pin-pointed in your pre-listening preparation.	
e. Translate any pictures into words to anticipate hearing them in the listening passage.	e. Do not worry if you do not understand every word when listening for the overall meaning or gist.	
f. Predict possible answers to the questions to prepare yourself to hear the answers.	f. Write an answer for every question: sometimes your guesses are accurate as your ears hear more than you think.	
g. Anticipate synonyms and ideas expressed in different words.	g. At the end of each section check your answers and transfer them with care to the answer sheet.	
h. Concentrate!		

DATA ANALYSIS PROCEDURE

For data analysis, first, the pretest and posttest papers at all levels of proficiency were collected and scored. Then, the data were subjected to descriptive statistics using SPSS software (19.0). To see the overall effects of task-based listening activities on students' listening ability of the learners, the mean and SD of the learner' pretest and posttest overall scores

at each proficiency level were determined and compared using three paired t-tests. In order to determine any interrelationships between each task type and the participants' language proficiency level, the learners' score in each particular task was calculated across the three proficiency levels. As there were seven task types, twenty-one paired t-tests were run.

TABLE 4
Mean and SD of the participants' overall listening performance in pretest and posttest at each proficiency level

Level of proficiency	Mean pretest	Mean posttest	Mean Difference	SD pretest	SD posttest	Sig. (2-tailed)
Intermediate	26.66	30.73	-4.06	5.34	4.38	.000
Upper-intermediate	25.83	29.86	-4.03	3.67	2.81	.000
Advanced	34.96	40.73	-5.76	4.64	2.07	.000

P<0.05

RESULTS AND DISCUSSION

The effect of task-based listening activities on overall listening ability

Table 4 presents the results of three paired t-tests run to answer the first research question as follows:

1. Do task-based listening activities have any effect on Iranian EFL learners' overall listening ability?

As can be seen, learners at all proficiency levels outperformed in their posttests compared to their pretests, indicating the positive effect of task-based listening activities on the overall listening ability of the participants. Thus, the first null hypothesis, 'task-based listening activities do not have any effect on Iranian EFL learners' listening ability', is rejected. The mean difference between the pretests and posttests at intermediate, upper-intermediate, and advanced levels was -4.06, -4.03, and -5.76, respectively, which were significant at P<0.05. The mean difference of the advanced level (-5.76) was the highest of all, suggesting that advanced learners benefited from the task-based listening activities more than the intermediate and upper-intermediate learners.

The reason may lie in the way learners at different proficiency levels approach the tasks. Low proficiency learners, due to their undeveloped skills and limited processing ability, usually resort to bottom-up processing, i.e., they use the incoming input as the basis for understanding the message. Hence, providing that the incoming input is not comprehensible enough for them, no understanding and subsequently no task achievement can be obtained. On the other hand, high proficiency learners, due to their more developed skills, use top-down processing, i.e., they use their background knowledge in understanding the meaning of a message, usually in combination with bottom-up processing which helps them to manage the listening tasks. Moreover, as stated by Saricoban (1999), listening to and understanding speech involve a number of basic processes including linguistic competence, previous knowledge and psychological variables that affect the mobilisation of these competence and knowledge in the particular task situation. These factors could be responsible for the difference in the listening performance of the three groups.

This finding, in general, provides evidence that shows the influence of having a task-based syllabus as a cognitively motivating approach to language learning (Prabhu, 1987), and specifically, confirms the positive effects of task-based listening activities on Iranian EFL learners' listening ability at all levels of language proficiency, and is to some extent consistent with the results obtained by other studies (Bahrami, 2010; Chang, 2008, 2009; Farrokhi & Modarres, 2012; Nasirian, 2012; Sarani *et al.*, 2014).

The correspondence between task types and proficiency level

Table 5 shows the results of multiple t-tests conducted to answer the second research question as follows:

2. *Do receptive and productive listening task types have any correspondences with a particular language proficiency level?*

As shown in Table 5, a correspondence can be detected between receptive and productive task types and a particular proficiency level; therefore, the second null hypothesis, 'the receptive and productive task types do not have any correspondences with a particular language proficiency level', is also rejected.

The results of paired t-tests run to determine any correspondences between each task and a particular proficiency level indicated that learners at all three levels of proficiency outperformed in their posttest compared to their pretest in the four receptive

listening tasks which included matching, labelling, form-filling, and selecting where all the mean differences were significant at $.000 \geq 0.05$. As far as the three productive listening tasks were concerned, i.e., in sentence completion, summary completion, and short-answer questions, the mean difference of the intermediate group was .090, .281, and .130, respectively, which was not significant at 0.05. However, the performance of the upper-intermediate and advanced level learners in all productive tasks was significant at 0.05.

The reason why lower-intermediate learners could not manage the productive listening activities, as suggested by researchers, might be that learners find tasks with an oral input easier than tasks presented in writing (Nunan, 1989; Prabhu, 1987). Learners can process the tasks containing the pictorial input (drawings, graphs, etc.) as presented in tasks such as matching, labelling, etc. more easily than those with written or verbal input including summary completion (Ellis, 2003). However, limiting the low proficiency learners to just receptive skills is not a good solution as it encourages just listening for comprehending whereas the ultimate goal of any language task is using language for communication and it is important to ascertain that learners are aware of this goal. In fact, receptive tasks should give way to productive tasks which integrate a verity of language skills including comprehending, listening, writing or speaking. If learners are made to produce something, the tasks will be more communicative. Therefore, it is suggested

that productive skills should be introduced for learners at all proficiency levels with the difficulty level adjusted, and with low proficiency learners receiving more instruction and practice on the productive tasks.

These findings are partially consistent with those of Bahrami's (2010) in which students showed improvement in matching and labelling tasks except for the task of selecting at all the proficiency levels, due to the fact that it was a context-free task which was not supported by visual information, and also form-filling at the advanced level

which was probably due to the procedural reasons. Nasirian (2012) also found a significant positive relationship between listening ability and all four (receptive) tasks. However, in terms of correspondence with proficiency level, his findings are not in agreement with those of the present study. In his study, labelling, selecting and matching tasks were found to have high correspondence to advanced and lower intermediate proficiency levels, whereas the matching task corresponded to the upper-intermediate proficiency level.

TABLE 5
Paired t-test of the participants' performance on each listening task at each language proficiency level

	Level of proficiency	Mean pretest	Mean posttest	Mean Difference	SD pretest	SD posttest	Sig. Matching
Listening Task	Intermediate	4.73	5.60	-0.86	1.74	1.24	.002
	Upper-intermediate	4.86	5.73	-0.86	1.35	0.98	.000
	Advanced	5.23	6.23	-0.90	1.44	0.77	.000
Labelling	Intermediate	4.70	5.30	-0.60	1.80	1.24	.001
	Upper-intermediate	4.76	5.46	-0.70	1.75	1.04	.001
	Advanced	4.90	5.73	-0.83	1.95	1.22	.002
Form-filling	Intermediate	3.90	4.60	-0.70	1.82	1.32	.002
	Upper-intermediate	4.53	5.16	-0.63	1.54	1.28	.004
	Advanced	5.56	6.23	-0.66	1.25	0.81	.000
Selecting	Intermediate	4.70	5.40	-0.73	1.72	1.27	.002
	Upper-intermediate	4.90	5.60	-0.70	1.32	1.03	.001
	Advanced	5.73	6.30	-0.56	1.14	0.79	.001
Sentence Completion	Intermediate	2.70	2.93	-0.23	1.29	1.04	.090
	Upper-intermediate	3.20	3.93	-0.73	1.64	1.41	.000
	Advanced	4.56	5.40	-0.83	1.75	1.19	.001
Summary Completion	Intermediate	2.73	2.93	-0.20	1.70	1.50	.281
	Upper-intermediate	3.76	4.26	-0.50	1.59	1.28	.000
	Advanced	4.23	5.06	-0.83	1.61	1.20	.000
Short-answer Question	Intermediate	3.53	3.83	-0.30	1.87	1.62	.130
	Upper-intermediate	4.06	4.86	-0.80	1.72	1.40	.000
	Advanced	4.66	5.76	-1.10	1.89	0.97	.001

A closer look at the results also shows an upward trend in the mean differences from intermediate to advanced levels for the productive listening tasks. More specifically, although learners at all proficiency levels showed improvement in all the listening task types, except for the productive tasks in the intermediate group, the improvement (and the mean difference between pretests and posttests) was the highest in the advanced level. For example, the mean difference between the pretest and posttest of the form-filling task in the intermediate, upper-intermediate and advanced levels was -0.60, -0.70, and -0.83, respectively. It shows that as the learners advance in their language proficiency, listening tasks become easier to manage for them. At lower levels, however, listening remains a more demanding task requiring more instruction and practice.

Overall, the findings support having a task-based approach (Nunan, 2004; Farrokhi & Modarres, 2012; Sarani *et al.*, 2014; Schweppe, 2012) to listening comprehension which leads to improvement in receptive and productive listening tasks. Using a variety of task types is necessary to make the language more communicative and make the activities more meaningful.

CONCLUSION

Listening, specifically, has an important place in second language learning; therefore, without good listening skills, successful communication cannot be achieved. TBLT is an effective methodological tool for investigating both theoretical and pedagogical aspects of listening and

places meaningful tasks at the heart of the learning process. The present study not only confirmed the finding of the previous studies but also added further insights into the relationship between different listening task types and learners' proficiency level.

Incorporating task-based listening activities in this study exposed ESL students to real-language use and enhanced their listening ability. The results showed both overall improvement in the listening ability of learners at all proficiency levels, and progress in each listening task type at each proficiency level except for the productive skills of sentence completion, summary completion, and short-answer question at the intermediate level. In other words, it was shown that productive tasks were more demanding for intermediate students than the receptive ones. Although the productive listening tasks did not result in significant improvements at this proficiency level, some degree of achievement was made; thus, a tentative conclusion can be drawn that productive skills may not be appropriate for the intermediate level and this finding certainly requires more investigation. In addition, it is suggested that productive skills are introduced at all less advanced levels with the difficulty level adjusted while more instruction and practice on these tasks are provided.

It is important to note that the advanced students appeared to progress more than the intermediate and the upper-intermediate groups. Apart from the learners' approach to listening activities and their processing ability, there are two overlapping purposes

underlying L2 listening process, namely, input and intake that may explain why advanced learners developed more in the listening tasks. Receptive tasks only need comprehension and what is understood as intake does not necessarily contribute to language development; thus, it does not turn into intake. This is when the importance of productive skills is highlighted. As the productive tasks require learners to both comprehend and produce language or, in other words, turn the input to intake, they are more likely to result in listening development. Thus, lack of productive activities compared to the receptive ones can be attributed to little achievement made in listening classes. In addition, advanced learners usually have inclination to utilise the linguistic input for successful communication while for intermediate students, it suffices to comprehend the input and not much effort is made to use it for more important goals such as communication. Accordingly, if communication as the main goal of language learning is emphasized and productive activities are incorporated from the early stages, the possibility of managing these tasks at different levels of proficiency would increase.

The findings of the present study provide foreign language educators and researchers with some implications. First, it encourages them to identify and utilise proper listening tasks with the right difficulty level in their classes which are compatible with learners' proficiency level. Therefore, learners become more encouraged to practice the listening tasks and enhance their listening ability.

Second, it invites them to incorporate both receptive and productive tasks to enhance learning and successful communication. Third, it encourages them to insert more control at less advanced levels and provide the learners with effective instruction on how to approach the productive tasks.

Despite its significance, this study had some limitations including using a sample which was not representative of the population and thus limited the generalisability of the results to wider contexts. Since this was the first study investigating the effect of all listening task-types on EFL students' language proficiency, further studies are required to confirm the results obtained by this study while taking the aforementioned limitations into account. Future studies can also take gender differences into account and observe if there is any difference between the effects of task types on listening ability of either male and female students.

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Pertanika is an international peer-reviewed journal devoted to the publication of original papers, and it serves as a forum for practical approaches to improving quality in issues pertaining to tropical agriculture and its related fields. *Pertanika* began publication in 1978 as Journal of Tropical Agricultural Science. In 1992, a decision was made to streamline *Pertanika* into three journals to meet the need for specialised journals in areas of study aligned with the interdisciplinary strengths of the university. The revamped Journal of Social Sciences & Humanities (JSSH) 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, particularly in the Asia Pacific region. Other *Pertanika* series include Journal of Tropical Agricultural Science (JTAS); and Journal of Science and Technology (JST).

JSSH is published in **English** and it is open to authors around the world regardless of the nationality. It is currently published four times a year i.e. in **March, June, September** and **December**.

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 12 weeks. The elapsed time from submission to publication for the articles averages 5-6 months.

Indexing of *Pertanika*

Pertanika is now over 33 years old; this accumulated knowledge has resulted in *Pertanika* JSSH being indexed in SCOPUS (Elsevier), EBSCO, Thomson (ISI) Web of Knowledge [CAB Abstracts], DOAJ, Google Scholar, ISC and MyAIS.

Future vision

We are continuously improving access to our journal archives, content, and research services. We have the drive to realise exciting new horizons that will benefit not only the academic community, but society itself.

We also have views on the future of our journals. The emergence of the online medium as the predominant vehicle for the 'consumption' and distribution of much academic research will be the ultimate instrument in the dissemination of research news to our scientists and readers.

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.

Editorial Statement

Pertanika is the official journal of Universiti Putra Malaysia. The abbreviation for *Pertanika* Journal of Social Sciences & Humanities is *Pertanika J. Soc. Sci. Hum.*

Guidelines for Authors

Publication policies

Pertanika policy prohibits an author from submitting the same manuscript for concurrent consideration by two or more publications. It prohibits as well publication of any manuscript that has already been published either in whole or substantial part elsewhere. It also does not permit publication of manuscript that has been published in full in Proceedings. Please refer to *Pertanika*'s **Code of Ethics** for full details.

Editorial process

Authors are notified on receipt of a manuscript and upon the editorial decision regarding publication.

Manuscript review: Manuscripts deemed suitable for publication are sent to the Editorial Board members and/or other reviewers. We encourage authors to suggest the names of possible reviewers. Notification of the editorial decision is usually provided within to eight to ten 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.

Author approval: Authors are responsible for all statements in articles, including changes made by editors. The liaison author must be available for consultation with an editor of *The Journal* to answer questions during the editorial process and to approve the edited copy. Authors receive edited typescript (not galley proofs) for final approval. Changes **cannot** be made to the copy after the edited version has been approved.

Manuscript preparation

Pertanika accepts submission of mainly four types of manuscripts. Each manuscript is classified as **regular** or **original** articles, **short communications**, **reviews**, and proposals for **special issues**. Articles must be in **English** and they must be competently written and argued in clear and concise grammatical English. Acceptable English usage and syntax are expected. Do not use slang, jargon, or obscure abbreviations or phrasing. Metric measurement is preferred; equivalent English measurement may be included in parentheses. Always provide the complete form of an acronym/abbreviation the first time it is presented in the text. Contributors are strongly recommended to have the manuscript checked by a colleague with ample experience in writing English manuscripts or an English language editor.

Linguistically hopeless manuscripts will be rejected straightaway (e.g., when the language is so poor that one cannot be sure of what the authors really mean). This process, taken by authors before submission, will greatly facilitate reviewing, and thus publication if the content is acceptable.

The instructions for authors must be followed. Manuscripts not adhering to the instructions will be returned for revision without review. Authors should prepare manuscripts according to the guidelines of *Pertanika*.

1. Regular article

Definition: Full-length original empirical investigations, consisting of introduction, materials and methods, results and discussion, conclusions. Original work must provide references and an explanation on research findings that contain new and significant findings.

Size: Should not exceed 5000 words or 8-10 printed pages (excluding the abstract, references, tables and/or figures). One printed page is roughly equivalent to 3 type-written pages.

2. Short communications

Definition: Significant new information to readers of the Journal in a short but complete form. It is suitable for the publication of technical advance, bioinformatics or insightful findings of plant and animal development and function.

Size: Should not exceed 2000 words or 4 printed pages, is intended for rapid publication. They are not intended for publishing preliminary results or to be a reduced version of Regular Papers or Rapid Papers.

3. Review article

Definition: Critical evaluation of materials about current research that had already been published by organizing, integrating, and evaluating previously published materials. Re-analyses as meta-analysis and systemic reviews are encouraged. Review articles should aim to provide systemic overviews, evaluations and interpretations of research in a given field.

Size: Should not exceed 4000 words or 7-8 printed pages.

4. Special issues

Definition: Usually papers from research presented at a conference, seminar, congress or a symposium.

Size: Should not exceed 5000 words or 8-10 printed pages.

5. Others

Definition: Brief reports, case studies, comments, Letters to the Editor, and replies on previously published articles may be considered.

Size: Should not exceed 2000 words or up to 4 printed pages.

With few exceptions, original manuscripts should not exceed the recommended length of 6 printed pages (about 18 typed pages, double-spaced and in 12-point font, tables and figures included). Printing is expensive, and, for the Journal, postage doubles when an issue exceeds 80 pages. You can understand then that there is little room for flexibility.

Long articles reduce the Journal's possibility to accept other high-quality contributions because of its 80-page restriction. We would like to publish as many good studies as possible, not only a few lengthy ones. (And, who reads overly long articles anyway?) Therefore, in our competition, short and concise manuscripts have a definite advantage.

Format

The paper should be formatted in one column format with at least 4cm margins and 1.5 line spacing throughout. Authors are advised to use Times New Roman 12-point font. Be especially careful when you are inserting special characters, as those inserted in different fonts may be replaced by different characters when converted to PDF files. It is well known that 'µ' will be replaced by other characters when fonts such as 'Symbol' or 'Mincho' are used.

A maximum of eight keywords should be indicated below the abstract to describe the contents of the manuscript. Leave a blank line between each paragraph and between each entry in the list of bibliographic references. Tables should preferably be placed in the same electronic file as the text. Authors should consult a recent issue of the Journal for table layout.

Every page of the manuscript, including the title page, references, tables, etc. should be numbered. However, no reference should be made to page numbers in the text; if necessary, one may refer to sections. Underline words that should be in italics, and do not underline any other words.

We recommend that authors prepare the text as a **Microsoft Word** file.

1. Manuscripts in general should be organised in the following order:

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In addition, the **Subject areas** most relevant to the study must be indicated on this page. Select the appropriate subject areas from the Scope of the Journals provided in the Manuscript Submission Guide.

- A **list of number of black and white / colour figures and tables** should also be indicated on this page. Figures submitted in color will be printed in colour. See "5. Figures & Photographs" for details.
- **Page 2: Author(s) and Corresponding author information.** This page should contain the **full title** of your paper with name(s) of all the authors, institutions and corresponding author's name, institution and full address (Street address, telephone number (including extension), hand phone number, fax number and e-mail address) for editorial correspondence. The names of the authors **must** be abbreviated following the international naming convention. e.g. Salleh, A.B., Tan, S.G., or Sapuan, S.M.

Authors' addresses. Multiple authors with different addresses must indicate their respective addresses separately by superscript numbers:

George Swan¹ and Nayan Kanwal²

¹Department of Biology, Faculty of Science, Duke University, Durham, North Carolina, USA.

²Office of the Deputy Vice Chancellor (R&I), Universiti Putra Malaysia, Serdang, Malaysia.

- **Page 3:** This page should **repeat** the **full title** of your paper with only the **Abstract** (the abstract should be less than 250 words for a Regular Paper and up to 100 words for a Short Communication). **Keywords** must also be provided on this page (Not more than eight keywords in alphabetical order).
- **Page 4 and subsequent pages:** This page should begin with the **Introduction** of your article and the rest of your paper should follow from page 5 onwards.

Abbreviations. Define alphabetically, other than abbreviations that can be used without definition. Words or phrases that are abbreviated in the introduction and following text should be written out in full the first time that they appear in the text, with each abbreviated form in parenthesis. Include the common name or scientific name, or both, of animal and plant materials.

Footnotes. Current addresses of authors if different from heading.

2. **Text.** Regular Papers should be prepared with the headings **Introduction, Materials and Methods, Results and Discussion, Conclusions** in this order. Short Communications should be prepared according to "8. *Short Communications.*" below.
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4. **Equations and Formulae.** These must be set up clearly and should be typed triple spaced. Numbers identifying equations should be in square brackets and placed on the right margin of the text.
5. **Figures & Photographs.** Submit an original figure or photograph. Line drawings must be clear, with high black and white contrast. Each figure or photograph should be prepared on a separate sheet and numbered consecutively with Arabic numerals. Appropriate sized numbers, letters and symbols should be used, no smaller than 2 mm in size after reduction to single column width (85 mm), 1.5-column width (120 mm) or full 2-column width (175 mm). Failure to comply with these specifications will require new figures and delay in publication. For electronic figures, create your figures using applications that are capable of preparing high resolution TIFF files acceptable for publication. In general, we require **300 dpi or higher resolution for coloured and half-tone artwork** and **1200 dpi or higher for line drawings**.

For review, you may attach low-resolution figures, which are still clear enough for reviewing, to keep the file of the manuscript under 5 MB. Illustrations may be produced at extra cost in colour at the discretion of the Publisher; the author could be charged Malaysian Ringgit 50 for each colour page.

6. **References.** Literature citations in the text should be made by name(s) of author(s) and year. For references with more than two authors, the name of the first author followed by 'et al.' should be used.

Swan and Kanwal (2007) reported that ...

The results have been interpreted (Kanwal *et al.*, 2009).

- References should be listed in alphabetical order, by the authors' last names. For the same author, or for the same set of authors, references should be arranged chronologically. If there is more than one publication in the same year for the same author(s), the letters 'a', 'b', etc., should be added to the year.
- When the authors are more than 11, list 5 authors and then et al.
- Do not use indentations in typing References. Use one line of space to separate each reference. The name of the journal should be written in full. For example:
 - Mellers, B. A. (2006a). Choice and the relative pleasure of consequences. *Psychological Bulletin*, 126, 910-924.
 - Mellers, B. A. (2006b). Treatment for sexually abused children and adolescents. *American Psychologist*, 55, 1040-1049.
 - Hawe, P. (2005). Capturing the meaning of "community" in community intervention evaluation: Some contributions from community psychology. *Health Promotion International*, 9, 199-210.
 - Braconier, H., & Ekholm, K. (2006). Swedish multinationals and competition from high and low wage location. *Review of International Economics*, 8, 448-461.
- In case of citing an author(s) who has published more than one paper in the same year, the papers should be distinguished by addition of a small letter as shown above, e.g. Jalaludin (1997a); Jalaludin (1997b).
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7. **Examples of other reference citations:**

Monographs: Kalimapur, Y.R. (2004). *Images of the U.S. Around the World: A Multicultural Perspective*. Albany, NY: State University of New York Press.

Chapter in Book: Bjork, R. A. (2007). Retrieval inhibition as an adaptive mechanism in human memory. In H. L. Roediger III & F. I. M. Craik (Eds.), *Varieties of memory & consciousness* (pp. 309-330). Hull: Hull University Press.

- **Proceedings:** Amir Awang. (2006). Counseling, human resources development and counseling services. In Sulaiman M. Yassin, Yahya Mat Hassan, Kamariah Abu Bakar, Esah Munji and Sabariah Mohd. Rashid (Eds.), *Proceedings of Asia Pacific Conference on Human Development* (p. 243-246). Serdang: Universiti Putra Malaysia.

8. **Short Communications** should include **Introduction, Materials and Methods, Results and Discussion, Conclusions** in this order. Headings should only be inserted for Materials and Methods. The abstract should be up to 100 words, as stated above. Short Communications must be 5 printed pages or less, including all references, figures and tables. References should be less than 30. A 5 page paper is usually approximately 3000 words plus four figures or tables (if each figure or table is less than 1/4 page).

*Authors should state the total number of words (including the Abstract) in the cover letter. Manuscripts that do not fulfill these criteria will be rejected as Short Communications without review.

STYLE OF THE MANUSCRIPT

Manuscripts should follow the style of the latest version of the Publication Manual of the American Psychological Association (APA). The journal uses American or British spelling and authors may follow the latest edition of the Oxford Advanced Learner's Dictionary for British spellings.

SUBMISSION OF MANUSCRIPTS

All articles should be submitted electronically using the ScholarOne web-based system. ScholarOne, a Thomson Reuters product provides comprehensive workflow management systems for scholarly journals. For more information, go to our web page and click "**Online Submission**".

Alternatively, you may submit the electronic files (cover letter, manuscript, and the **Manuscript Submission Kit** comprising *Declaration and Referral* form) via email directly to the Executive Editor. If the files are too large to email, mail a CD containing the files. The **Manuscript Submission Guide** and **Submission Kit** are available from the *Pertanika's* home page at <http://www.pertanika.upm.edu.my/home.php> or from the Chief Executive Editor's office upon request.

All articles submitted to the journal **must comply** with these instructions. Failure to do so will result in return of the manuscript and possible delay in publication.

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All submissions must be accompanied by a cover letter detailing what you are submitting. Papers are accepted for publication in the journal on the understanding that the article is original and the content has not been published or submitted for publication elsewhere. This must be stated in the cover letter.

The cover letter must also contain an acknowledgement that all authors have contributed significantly, and that all authors are in agreement with the content of the manuscript.

The cover letter of the paper should contain (i) the title; (ii) the full names of the authors; (iii) the addresses of the institutions at which the work was carried out together with (iv) the full postal and email address, plus facsimile and telephone numbers of the author to whom correspondence about the manuscript should be sent. The present address of any author, if different from that where the work was carried out, should be supplied in a footnote.

As articles are double-blind reviewed, material that might identify authorship of the paper should be placed on a cover sheet.

Peer review

Pertanika follows a **double-blind peer-review** process. 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.

In the peer-review process, three referees independently evaluate the scientific quality of the submitted manuscripts. Authors are encouraged to indicate in the **Referral form** using the **Manuscript Submission Kit** the names of three potential reviewers, but the editors will make the final choice. The editors are not, however, bound by these suggestions..

Manuscripts should be written so that they are intelligible to the professional reader who is not a specialist in the particular field. They should be written in a clear, concise, direct style. Where contributions are judged as acceptable for publication on the basis of content, the Editor reserves the right to modify the typescripts to eliminate ambiguity and repetition, and improve communication between author and reader. If extensive alterations are required, the manuscript will be returned to the author for revision.

The Journal's 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 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 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 executive editor asks them to complete the review in three weeks and encloses two forms: (a) referral form B and (b) reviewer's comment form along with reviewer's guidelines. 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 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 Editorial Board, 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 submit a revised version of the paper to the executive editor along with specific information describing how they have answered the concerns of the reviewers and the editor.
5. The executive editor sends the revised paper out for 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 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, the paper is sent to that Press and 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 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.

English language editing

Pertanika **emphasizes** on the linguistic accuracy of every manuscript published. Thus all authors are required to get their manuscripts edited by **professional English language editors**. Author(s) **must provide a certificate** confirming that their manuscripts have been adequately edited. A proof from a recognised editing service should be submitted together with the cover letter at the time of submitting a manuscript to Pertanika. **All costs will be borne by the author(s)**.

This step, taken by authors before submission, will greatly facilitate reviewing, and thus publication if the content is acceptable.

Author material archive policy

Authors who require the return of any submitted material that is rejected for publication in the journal should indicate on the cover letter. If no indication is given, that author's material should be returned, the Editorial Office will dispose of all hardcopy and electronic material.

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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.

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Under the Journal's open access initiative, authors can choose to download free material (via PDF link) from any of the journal issues from Pertanika's website. Under "Browse Journals" you will see a link entitled "Current Issues" or "Archives". Here you will get access to all back-issues from 1978 onwards.

The **corresponding author** for all articles will receive one complimentary hardcopy of the journal in which his/her articles is published. In addition, 20 off prints of the full text of their article will also be provided. Additional copies of the journals may be purchased by writing to the executive editor.



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PROFILE: Our journals are circulated in large numbers all over Malaysia, and beyond in Southeast Asia. Our circulation covers other overseas countries as well. We ensure that your work reaches the widest possible audience in print and online, through our wide publicity campaigns held frequently, and through our constantly developing electronic initiatives such as Web of Science Author Connect backed by Thomson Reuters.

QUALITY: Our journals' reputation for quality is unsurpassed ensuring that the originality, authority and accuracy of your work is fully recognised. Each manuscript submitted to *Pertanika* undergoes a rigid originality check. Our double-blind peer refereeing procedures are fair and open, and we aim to help authors develop and improve their scientific work. *Pertanika* is now over 35 years old; this accumulated knowledge has resulted in our journals being indexed in SCOPUS (Elsevier), Thomson (ISI) Web of Knowledge [BIOSIS & CAB Abstracts], EBSCO, DOAJ, Google Scholar, AGRICOLA, ERA, ISC, Citefactor, Rubriq and MyAIS.

AUTHOR SERVICES: We provide a rapid response service to all our authors, with dedicated support staff for each journal, and a point of contact throughout the refereeing and production processes. Our aim is to ensure that the production process is as smooth as possible, is borne out by the high number of authors who prefer to publish with us.

CODE OF ETHICS: Our Journal has adopted a Code of Ethics to ensure that its commitment to integrity is recognized and adhered to by contributors, editors and reviewers. It warns against plagiarism and self-plagiarism, and provides guidelines on authorship, copyright and submission, among others.

PRESS RELEASES: Landmark academic papers that are published in *Pertanika* journals are converted into press releases as a unique strategy for increasing visibility of the journal as well as to make major findings accessible to non-specialist readers. These press releases are then featured in the university's UK-based research portal, ResearchSEA, for the perusal of journalists all over the world.

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



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—MAY 2014

About the Journal

Pertanika is an international multidisciplinary peer-reviewed leading journal in Malaysia which began publication in 1978. The journal publishes in three different areas — Journal of Tropical Agricultural Science (JTAS); Journal of Science and Technology (JST); and Journal of Social Sciences and Humanities (JSSH).

JTAS is devoted to the publication of original papers that serves as a forum for practical approaches to improving quality in issues pertaining to **tropical agricultural research-** or related fields of study. It is published four times a year in **February, May, August and November.**

JST caters for **science and engineering research-** or related fields of study. It is published twice a year in **January and July.**

JSSH deals in **research or theories in social sciences and humanities research.** It aims to develop as a flagship journal with a focus on emerging issues pertaining to the social and behavioural sciences as well as the humanities, particularly in the Asia Pacific region. It is published four times a year in **March, June, September and December.**



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now accepting submissions...

Pertanika invites you to explore frontiers from all key areas of **agriculture, science and technology to social sciences and humanities.**

Original research and review articles are invited from scholars, scientists, professors, post-docs, and university students who are seeking publishing opportunities for their research papers through the Journal's three titles; JTAS, JST & JSSH. Preference is given to the work on leading and innovative research approaches.

Pertanika is a fast track peer-reviewed and open-access academic journal published by **Universiti Putra Malaysia.** To date, *Pertanika* Journals have been indexed by many important databases. Authors may contribute their scientific work by publishing in UPM's hallmark SCOPUS & ISI indexed journals.

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Questions regarding submissions should only be directed to the **Chief Executive Editor**, *Pertanika* Journals.

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