



UNIVERSITI PUTRA MALAYSIA

***RELATIONSHIP BETWEEN TEACHING AND LEARNING
APPROACHES AND STUDENT ENGAGEMENT AT
A SELECTED MALAYSIAN RESEARCH UNIVERSITY***

TEOH HEE CHONG

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UNIVERSITY**

By

TEOH HEE CHONG

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in fulfilment of the Requirements for the Degree of Doctor of Philosophy**

August 2015

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DEDICATION

This work is dedicated to the memory of my late parents,
Teoh Soon Ngik and ***Yong Shuang Hong***
May they be rest in peace and be free from all suffering and harm.

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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By

TEOH HEE CHONG

August 2015

Chair: Maria Chong Abdullah, PhD
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Student Engagement is significantly associated with the personal development of undergraduates, as well as the institutional development of tertiary education. The scenario of disengagement will affect students' performance during their collegiate life and their career advancement after they graduate. Therefore, this study investigates Approaches to Teaching and Student Approaches to Learning of university students towards predicting Student Engagement and Academic Achievement in their university experience. In addition, this study explores the level of Student Engagement, Academic Achievement, Approaches to Teaching and Student Approaches to Learning among undergraduates.

A correlational research design was used in this study. The respondents comprised 350 second year students from a local public university. The data for this study were collected by utilizing three instruments, namely Student's Perception on Approaches to Teaching Inventory (to measure the Approaches to Teaching), Study Process Questionnaire – 2 Factors (Malaysia) (to measure Student Approaches to Learning) and Student Engagement Questionnaire (to measure Student Engagement). Data were analysed using descriptive and inferential statistics.

The study found that the majority of students demonstrated a moderate level of engagement in their university experience. Among the five constructs of Student Engagement, students showed a high level of Life-long Learning interest, followed by a moderate level of Cooperative Learning, Active Learning, Student-faculty Interaction and Experience with Diversity. The findings of this study did not show any significant difference for the engagement level of male and female students, or in respect of the five constructs of Student Engagement. The findings also revealed that students possessed a high level of Academic Achievement in their study. Students in this study perceived that their lecturers applied a moderate level of Teacher-focused teaching approach. Meanwhile, students perceived their lecturers applied a high level of Student-focused teaching approach. This study further identified that students adopted a moderate level of Surface and Deep Approaches in their study. All the variables involved in this study were found to have significant correlation with each other.

The results of path analysis confirmed the fit of the proposed Teaching and Learning Engagement model. This model was also suitable for use with male and female students. The model indicated that the Teacher-focused teaching approach has a significant direct effect on the Surface Approach and Academic Achievement. The student-focused teaching approach was also found to have a significant direct effect on the Surface Approach, Deep Approach and Student Engagement. In addition, the Deep Approach was also found to have a significant effect on Student Engagement. The Deep Approach also partially mediated the relationship between the Student-focused teaching approach and Student Engagement. No significant differences were found for the direct and indirect effects among variables across gender.

In conclusion, this study found that the proposed Teaching and Learning Engagement model fitted the sample data well. The data analysis also found that Approaches to Teaching (Student-focused and Teacher-focused) and Student Approaches to Learning (Deep and Surface Approaches) had a different degree of direct and indirect effects on Student Engagement and Academic Achievement.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor falsafah

**HUBUNGAN ANTARA PENDEKATAN PENGAJARAN DAN PEMBELAJARAN
DENGAN PENGLIBATAN PELAJAR DI SEBUAH UNIVERSITI PENYELIDIKAN
MALAYSIA YANG TERPILIH**

Oleh

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Penglibatan pelajar mempunyai hubungan signifikan dengan perkembangan peribadi para mahasiswa dan juga perkembangan institusi pengajian tinggi. Senario kurang penglibatan akan menjejaskan prestasi pelajar semasa kehidupan mereka di universiti dan juga kemajuan kerjaya apabila mereka tamat pengajian kelak. Justeru, kajian ini bertujuan untuk menyiasat ramalan pendekatan pengajaran dan pembelajaran ke atas penglibatan pelajar serta pencapaian akademik dalam pengalaman mereka di universiti. Di samping itu, kajian ini juga meneroka tahap penglibatan pelajar, pencapaian akademik, pendekatan pengajaran dan pembelajaran dalam kalangan mahasiswa.

Kajian ini menggunakan reka bentuk korelasi. Sejumlah 350 orang pelajar tahun kedua di sebuah universiti awam terlibat sebagai responden kajian. Data dalam kajian ini dikumpul dengan menggunakan tiga instrument, iaitu *6W XGHQW 13HUEHSWLRQ* *on Approaches to Teaching Inventory* (untuk mengukur pendekatan pengajaran), *Study Process Questionnaire ±2 Factors (Malaysia)* (untuk mengukur pendekatan pembelajaran) dan *Student Engagement Questionnaire* (untuk mengukur penglibatan pelajar). Data kajian dianalisis dengan menggunakan statistik deskriptif dan inferensi.

Kajian ini mendapati kebanyakan pelajar menunjukkan tahap penglibatan yang sederhana dalam pengalaman mereka di universiti. Antara lima konstruk penglibatan pelajar, pelajar menunjukkan tahap yang tinggi bagi minat pembelajaran sepanjang hayat, diikuti dengan tahap sederhana bagi pembelajaran koperatif, pembelajaran aktif, interaksi antara pelajar-pensyarah, dan pengalaman terhadap kepelbagaian. Dapatan kajian ini tidak menunjukkan terdapat sebarang perbezaan yang signifikan bagi tahap penglibatan, dan juga lima konstraknya untuk pelajar lelaki dan perempuan. Dapatan kajian juga mendedahkan pelajar mempunyai tahap pencapaian akademik yang tinggi dalam pembelajaran mereka. Pelajar dalam kajian ini melihat pensyarah mereka mengguna pendekatan pengajaran berpusatkan guru pada tahap yang sederhana. Pada masa yang sama, pelajar melihat pensyarah mereka mengguna pendekatan pengajaran berpusatkan pelajar pada tahap yang tinggi. Kajian ini turut mengenal pasti bahawa pelajar memakai pendekatan permukaan dan mendalam pada tahap sederhana dalam

pembelajaran mereka. Semua pembolehubah yang terlibat dalam kajian ini didapati mempunyai hubungan signifikan antara satu sama lain.

Keputusan analisis laluan mengesahkan model penglibatan pengajaran dan pembelajaran yang dicadangkan adalah menepati kesesuaian model. Model ini adalah sesuai untuk pelajar lelaki dan perempuan. Model ini menunjukkan pendekatan pengajaran berpusatkan guru mempunyai kesan langsung yang signifikan terhadap pendekatan permukaan dan pencapaian akademik. Pendekatan pengajaran berpusatkan pelajar juga didapati mempunyai kesan langsung yang signifikan ke atas pendekatan permukaan, pendekatan mendalam dan penglibatan pelajar. Di samping itu, pendekatan mendalam juga didapati mempunyai kesan signifikan ke atas penglibatan pelajar. Pendekatan mendalam merupakan pengantara separa bagi hubungan antara pendekatan pengajaran berpusatkan guru dan penglibatan pelajar. Tidak ada perbezaan yang signifikan didapati dari segi jantina bagi kesan langsung dan tidak langsung antara pembolehubah.

Sebagai kesimpulan, kajian ini telah menyokong cadangan model penglibatan pengajaran dan pembelajaran adalah bersesuaian dengan data sampel. Analisis data juga mendapati pendekatan pengajaran (berpusatkan pelajar dan berpusatkan guru) dan pendekatan pembelajaran pelajar (pendekatan permukaan dan mendalam) mempunyai kesan langsung dan tidak langsung yang berlainan darjah terhadap penglibatan pelajar dan pencapaian akademik.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

AA	Academic Achievement
AL	Active Learning
AT	Approaches to Teaching
ATI	Approaches to Teaching Inventory
CCSF	Conceptual Change/Student-focused
CL	Cooperative Learning
CFA	Confirmatory Factor Analysis
CSEQ	College Student Experiences Questionnaire
DA	Deep Approach
EWD	Experiences With Diversity
ITTF	Information Transmission/Teacher-focused
LLL	Life-Long Learning
S-ATI	Student's Perception on Approaches to Teaching Inventory
SEQ	Student Engagement Questionnaire
SPQ-2FM	Study Process Questionnaire – 2 factors (Malaysia)
PA	Path Analysis
R-SPQ-2F	Revised Study Process Questionnaire – 2 factors
RU	Research University
SA	Surface Approach
SAL	Student Approaches to Learning
SE	Student Engagement
SEM	Structural Equation Modeling
SF	Student-focused teaching approach
SFI	Student-Faculty Interaction
SPQ	Study Process Questionnaire
TF	Teacher-focused teaching approach
AA	Academic Achievement

CHAPTER 1

INTRODUCTION

1.1 Introduction

The discussion in this chapter focuses on the concept, importance and application of *Student Engagement* (SE), in relation to Malaysia's tertiary education. This study examines two important issues associated with the problems of higher learning institutions in Malaysia: 1) disengagement in educational activities and 2) approaches to teaching and learning as determinant factors for Student Engagement (SE). These two issues shape the objectives, research questions and hypotheses of the current study. Lastly, the significance of study, limitations and operational definition were discussed.

1.2 Background

1.2.1 The Concept and Importance of Student Engagement in Higher Education

The concept of Student Engagement (SE) has been addressed in the literature for more than 70 years according to Kuh (2009). It appears in different terminology but refers to the same concept – “students learn from what they do in college” (Pike & Kuh, 2005a, p. 186). Pace was the one who promoted the idea of “quality of student effort” in the 1980s (Astin & Schroeder, 2003). He believes that the quality of education is determined by the engagement of students in the learning process and the enriching educational experience in higher learning institutions. His findings laid the foundation for later research work (Pace, 1990).

This concept has growing importance in serving two higher education objectives: institutional and individual development. At the institutional level, there are certain positive policies and practices that are highly associated with Student Engagement (SE), which directly increase institutional productivity (Kuh & Hu, 2001). Perhaps a well-known set of principles in highlighting the good practices in higher education institutions is the “Seven Principles for Good Practice in Undergraduate Education” (Chickering & Gamson, 1987). These identified principles are (1) encourage contact between students and faculty; (2) develop reciprocity and cooperation among students; (3) active learning techniques; (4) prompt feedback; (5) time on task; (6) communicate high expectations; and (7) respect diverse talents and ways of learning. These principles play a profound role in underpinning the development of the concept for Student Engagement (SE).

In addition, students, if fully engaged with the facilities and opportunities provided by higher institutions, will maximize their learning, grade and personal development (Carini, Kuh & Klein, 2006; Kuh, Chen & Nelson Laird, 2007). The concept of Student Engagement (SE) has also been treated as the solution to the lower graduation rate of low income and first-generation college students (Engle & Tinto, 2008). Many studies have examined the relationship between Student Engagement (SE) and persistence (Pascarella & Terenzini, 2005; Tinto, 2000). Others conclude that engaging in various educational activities will affect the quality of life after college in a positive way (Kuh, 2009; Pascarella & Terenzini, 2005).

Four specific reasons – administrative, economic, social, and educational – increase the interest of academicians in Student Engagement (SE). For administrative reasons, academicians believe that the effectiveness of higher educational institutional policies and practices should be measured by Student Engagement (SE). Higher educational institutions are always subjected to criticism when their graduates are not competitive in the job market. Student Engagement (SE) is evidence that students are also accountable for the investment in their own learning and development (Pace, 1984). As Pace stated in his report, “what account most is not who you are or where you are but what you do” (1998, p. 28), and he consistently proved that students were also responsible for their own success with his research findings in the 1980s and 1990s.

For economic reasons, Student Engagement (SE) can help universities to allocate resources and organize learning activities, which can maximize learning productivity (Nelson Laird, Chen & Kuh, 2008). Kuh and Hu (2001) defined learning productivity as the combination of Student Engagement (SE) in educational activities and the gains students make through their college experiences. By not increasing the costs of administration, the effort to improve learning productivity by boosting the engagement of students is necessary (Kuh, Pace & Vesper, 1997).

For social reasons, Student Engagement (SE) is also very useful in identifying the connection between various social groups and their involvement in educational purposeful activities. The social issues involved in this aspect in terms of their level of engagement have been studied in some of the earlier research. These issues include students working part time while attending class (Pike, Kuh & Massa-Mckinley, 2008), parent’s education background (Engle & Tinto, 2008; Pike & Kuh, 2005b), and residents on campus and commuters to colleges (Astin, 1999). In addition, the relation between low-income students (Engle & Tinto, 2008), gender and racial groups’ and Student Engagement (SE) in higher education (Hu & Kuh, 2002) has consistently been a focus of past research. The issue of educational performance between local and international students can also be identified through their engagement in their studies (Zhao, Kuh & Carini, 2005).

Besides the above-mentioned reasons, Student Engagement (SE) has also been proven to be positively linked with student learning in universities (Carini et al., 2006; Pace, 1990; Tinto, 1997). The premise is simple, as according to Carini, Kuh and Klein, “the more students learn and practice a subject, and they will gain more from it” (2006, p. 2). This idea is in line with the concept promoted by Pace around 1980 with the term “quality of student effort” (Astin & Schroeder, 2003). He consistently reported a relationship between Student Engagement (SE) and student achievement (Pace, 1982, 1984 & 1990). Since then, higher education institutions have chosen Student Engagement (SE) as an alternative to examine the effectiveness of educationally productive activities. Student Engagement (SE) has functioned as a proxy for the desired outcomes of universities (Kuh, Nelson Laird & Umbach, 2004). In other words, educational activities that can strengthen Student Engagement (SE) are said to be able to increase general academic abilities, critical thinking, grades and persistence rates (Pike & Kuh, 2005a).

Hence, studies have been conducted to identify the relationship between various educational activities with Student Engagement (SE), such as inquiry-oriented activities (Hu, Kuh & Li, 2008), student’s experience with information technologies (Nelson Laird & Kuh, 2005), learning communities (Tinto, 2000; Zhao & Kuh, 2004), and freshman interest group (Tinto & Goodsell, 1993). All these activities have been proven to link positively with Student Engagement (SE) either conditionally or unconditionally.

1.2.2 Student Engagement as Alternative Assessment Approach on Students’ Performance

Student Engagement (SE) reflects students’ participation and involvement in educational practices inside and outside the classroom throughout their studies in university (NSSE, 2007). Involvement can be implied from physical and psychological participation in learning experiences (Astin, 1999).

A common scenario among students in university is that they are more concerned about their results or grade but care little about the mastery of the subject matter. They can also register for courses they are not interested in, as long as, to their understanding, the courses are easy to score. They are willing to take a shortcut (an easy way), or even to cheat when they are actually capable of learning well. Why do students emphasize the grade more than knowledge? Why is it so difficult to get students to reflect, to concern, and to engage? These questions constitute national or even international issues pertaining to Student Engagement (SE) (Barkley, 2010).

Student Engagement (SE) works more as a process indicator rather than a product indicator. Pace mentioned in his earlier research that “education is both a process and product” (1982, p. 4). This statement is supported by Astin, who explained that education is not about producing a product, but adding value to students (1985). The idea of process indicators is best

described in “Seven Principles of Good Practice in Undergraduate Education” (Chickering & Gamson, 1987). Therefore, process-oriented is better than outcome-oriented in analysing the aim of education (Coates, 2006). As Shulman wrote, “Engagement in this sense is not just a proxy for learning but a fundamental purpose of education” (2002, p. 40).

There are several reasons to support the development of process indicators, such as Student Engagement (SE), instead of product indicators being used in higher education. Firstly, Student Engagement (SE), as a process indicator, provides a valuable and holistic perspective on the student experience in higher education. Secondly, according to Shulman (2002), “being engaged” is intrinsically important in itself. Engagement represents individuals who are “living the life of the university student” (Coates, 2006, p. 32). Students are exposing themselves to people, engaging in various activities, and taking advantage of different facilities, which are important agents of personal and professional growth. Lastly, process indicators can overcome many limitations of product indicators, which include, for example, the difficulty in determining which outcomes to consider, the difficulty in measuring, the limited capacity and localization, and being difficult to interpret. Conversely, process data are easier to assess, proximal, tangible, ready to use, easier to interpret, and easier to apply to improve the quality of education (Coates, 2006; Kuh et al., 1997).

In addition, the teaching and learning process are deemed to be the main activities provided by universities and also practiced by students. Student Engagement (SE) will increase when the teacher makes sense and meaning of the subjects being taught. Jones (2009) supported this argument by indicating that the teacher has to create a safe learning environment that motivates students to face challenges and apply higher order skills. These findings are also supported by Noor Mala Ibrahim and Nor Hidayah Ramli (2010) who reiterated that the teaching and learning process plays an important role in determining the learners’ understanding and their motivation to learn the subject.

1.2.3 The Role of Teaching in Engaging Students

Educationists believe that good practices in undergraduate teaching (Chickering & Gamson, 1987; Kuh et al., 1997) will directly affect Student Engagement (SE) in the classroom and in activities outside the classroom (Kuh & Hu, 2001). Lecturers who manage to implement good practices will not just involve their students in classroom activities but also encourage better student-faculty interaction beyond the classroom (Engle & Tinto, 2008). The rationale behind this argument is simply because lecturers are the key players who have frequent interaction with students and serve to notify students about the availability of opportunities and facilities outside the classroom (Pace, 1990; Tinto, 1990). In other words, it means that the

classroom-learning environment and teaching practices are crucial and place high expectations on the job of the lecturers (Nelson Laird et al., 2008).

Various teaching and learning models have been proposed in psychological education and practised by students in universities. In this study, the approaches of teaching based on Fox (1983), Leung, Lu, X.H., Chen, & Lu, M. (2008a), Trigwell and Prosser (2004), and Prosser and Trigwell (2006) have been chosen, which differentiate teaching approaches into simple theories or *Teacher-focused* (TF) and developed theories or *Student-focused* (SF). According to Fox (1983), the simple theories or Teacher-focused (TF) teaching approach considers the simple relationship between teaching and learning. Knowledge is simply transferred to and received by students. This is a one-way process, and the learning outcome is predetermined. Prosser and Trigwell (2006) also stated that the simple theories approach in the teaching process focuses on facts and skills without an in-depth understanding of their relationship.

In contrast, the developed theories or Student-focused (SF) teaching approach argue that the student is a fellow traveller who has his/her own experiences, abilities, motives, and objectives in the learning process. The student is an active learner in gaining knowledge and the teacher is merely playing the role of a facilitator. Teachers just need to focus and care about the internal personal growth of students. Their duty is to guide and lead students, and emphasize what the student is doing and learning rather than what the teacher is teaching and covering (Leung, Ng, & Li, 2004; Trigwell, Prosser, & Taylor, 1994). In addition, lecturers must listen attentively to their students, interact effectively with them and support them to achieve a high level of academic performance (Nelson Laird et al., 2008).

1.2.4 Engaging students with learning approaches

According to Marton and Saljo (1976), there are two different approaches in which students go about learning, called "*Surface*" (SA) and "*Deep*" (DA). Students adopting the Surface Approach (SA) just aim to achieve the minimum requirement, whereas deep learners will study the content precisely, learn in detail and aim for complete comprehension of the meaning (Dasari, 2009).

Various factors influence students to adopt a particular approach to learning, such as course content, assessment method, workload, teaching method, students' perception of the relevance and interest in a course, studying year, and age of students (Gibbs, 1992; Kember, 1997; Ramsden, 1987). This study focuses on the teaching approaches as many findings indicate that they have a significant relationship with student approaches to learning (Trigwell, Prosser & Waterhouse, 1999). In relation to that, student approaches to learning should be given special attention as research in

higher education has repeatedly shown that approaches to and conceptions of learning are related to the quality of learning outcomes (Goh, 2008).

1.3 Problem Statement

Recent investigations show that higher institutions are facing more signs of disengagement or lack of commitment rather than engagement among undergraduate students (Astin, Parrot, Korn, & Sax, 1997; Kazmi, 2010; Kuh, 2003; McInnis, 2001). Studies in Australia and the United States showed that the level of engagement in higher education is declining, and that undergraduates are becoming less involved with the university, or are not as excellent as previous generations. Similarly, students also find that they are not motivated to study and unable to manage the study workload. In addition, students spend less time seeking teachers' advice, there are more cases of "oversleeping" and "missing class", becoming materialistic and expecting the university to assist them in achieving instrumental goals. In other words, there are more students who graduate with higher grades but are doing less (Astin et. Al., 1997; Kuh, 1998; McInnis, 2001).

Despite the growing use of Student Engagement (SE) as an indicator of engagement in countries, such as the US, Canada and Australia, the research dealing directly with Student Engagement (SE) in Malaysian public universities is still scanty. The studies about Student Engagement (SE) in Malaysia revealed that most of the students scored below average for student-faculty interaction, active and collaborative learning, and effective educational practices (Fauziah Md. Jaafar, Rosna Awang Hashim & Tengku Faekah Tengku Ariffin, 2012; Norzaini Azman, Manisah Mohd Ali, Abdul Halim Tamuri, & Zalizan Mohd Jelas, 2005).

Furthermore, based on the constructs of Student Engagement (SE), such as student-faculty interaction and active learning, the same scenario of disengagement can be observed in the Malaysian context. Previous studies found that the majority of students in public and private universities of Malaysia were teacher-centred and lacked personal autonomy (Thang, 2005; Thang, 2009; Thang & Azarina Alias, 2007). The findings are in line with the research results saying that Asian students have a low level of in-class participation (Dasari, 2009; Tani, 2005). There are studies revealed that less than 20% of students asked the lecturers questions during class. Furthermore, the lecturers and learners both agreed that students were passive in classroom participation (Liew, 2009; Zainal Abidin Sayadi, 2007). Negatively passive participation is defined as being quiet in class, not concerned about class activities, not interested in the lessons and remaining in their own world (Siti Maziha & Nik Suryani, 2011). However, without a straightforward measurement for Student Engagement (SE), no actual or definite description can be made concerning the level of engagement of the students. This study will perhaps give a better idea about Student

Engagement (SE) in public higher institutions and bridge the gap with the current research studies.

The different in level of Student Engagement (SE) across gender is another interesting issue studied in this research. There are studies reported that, on average, females scored higher than males or, females socialise slightly more than males regarding course-related problems or when they need to borrow course materials (Krause, McInnis & Welle, 2003; Kuh, 2003). In Malaysia, females were found score significantly higher than males in the active and collaborative learning (Norzaini Azman et. al., 2005). Thus, this study will examine how gender may affect the level of Student Engagement (SE) among students.

The outcomes of disengagement will affect the performance of the students during their collegiate life and also their career advancement after they graduate from university. When the students are not committed to their collegiate life, they tend to spend fewer days participating in activities on campus. They lack cooperation with other students in areas of their courses, and are not consistent with their studying throughout the semester. Thus, these students are anticipated to perform poorly in the examination, and, most likely, to experience deferring, retention or drop out from their studies (McInnis, 2001; Tinto, 2000). Furthermore, previous study also determined that the disengaged group made much less progress in their capacity for critical thinking and inquiry. Subsequently, they have lower vocational readiness compared with engaged students (Pace, 1990).

Therefore, a better description and understanding pertaining to Student Engagement (SE) is necessary for policymakers, administrators, lecturers, and students. In addition, the factors of engagement need to be identified to provide insights into the possible solutions for the issues raised. In this study, the researcher has chosen to examine *Approaches to Teaching* (AT) together with *Student Approaches to Learning* (SAL) as among the factors that will affect Student Engagement (SE).

Concisely, a better approach to the teaching and learning process is needed to overcome the challenges faced. An effective teaching method will help instructors to deliver their lessons clearly and precisely, in which a smart learner can fully utilize his time and talent to master the knowledge for future application. Hence, in this study, it is intended to formulate an effective teaching and learning model that can maximize Student Engagement (SE) of higher learning institutions. The researcher names this hypothesized model as the **Teaching and Learning Engagement Model or TL Engagement Model**, which will be explored in detail in Chapter 2.

1.4 Research Objective

This study investigates the Approaches to Teaching (AT) and Student Approaches to Learning (SAL) of university students towards predicting Student Engagement (SE) and *Academic Achievement* (AA) in their university experience.

The specific objectives of this study are:

1. To identify the level of Student Engagement (SE), Academic Achievement (AA), Approaches to Teaching (AT) and Student Approaches to Learning (SAL) among undergraduates.
2. To differentiate the level of Student Engagement (SE) based on gender.
3. To investigate the direct effects of Approaches to Teaching (AT) and Student Approaches to Learning (SAL) of university students on Student Engagement (SE) and Academic Achievement (AA) in the Teaching and Learning Engagement Model.
4. To determine the mediating effect of Student Approaches to Learning (SAL) on the relationship between Approaches to Teaching (AT) and Student Engagement (SE).
5. To determine the mediating effect of Student Engagement (SE) on the relationship between Student Approaches to Learning (SAL) and Academic Achievement (AA).
6. To investigate the moderating role of gender in the contributions of Approaches to Teaching (AT) and Student Approaches to Learning (SAL) of university students towards predicting Student Engagement (SE) and Academic Achievement (AA) in their university experience.

Derived from the specific objectives, the research questions (RQ) and Hypotheses (H) for this research are stated as follows:

Research Objective 1

RQ1: What is the level of Student Engagement (SE) and its constructs among undergraduates?

RQ2: What is the level of Academic Achievement (AA) among undergraduates?

RQ3: What is the level of the Teacher-focused (TF) and Student-focused (SF) teaching approach, as perceived by undergraduates?

RQ4: What is the level of the Surface Approach (SA) and Deep Approach (DA) adopted by undergraduates?

Research Objective 2

H1: There is significant difference in Student Engagement (SE) across gender.

H2: There are significant differences in the constructs of Student Engagement (SE) based on gender.

Research Objective 3

H3: Teacher-focused (TF) is negatively related to Student Engagement (SE).

- H4: Student-focused (SF) is positively related to Student Engagement (SE).
- H5: Surface Approach (SA) is negatively related to Student Engagement (SE).
- H6: Deep Approach (DA) is positively related to Student Engagement (SE).
- H7: Teacher-focused (TF) is positively related to Surface Approach (SA).
- H8: Student-focused (SF) is negatively related to Surface Approach (SA).
- H9: Teacher-focused (TF) is negatively related to Deep Approach (DA).
- H10: Student-focused (SF) is positively related to Deep Approach (DA).
- H11: Surface Approach (SA) is negatively related to Academic Achievement (AA).
- H12: Deep Approach (DA) is positively related to Academic Achievement (AA).
- H13: Student Engagement (SE) is positively related to Academic Achievement (AA).

Research Objective 4

- H14: Deep Approach (DA) mediates the relationship between Student-focused (SF) teaching approach and Student Engagement (SE).
- H15: Deep Approach (DA) mediates the relationship between Teacher-focused (TF) teaching approach and Student Engagement (SE).
- H16: Surface Approach (SA) mediates the relationship between Student-focused (SF) teaching approach and Student Engagement (SE).
- H17: Surface Approach (SA) mediates the relationship between Teacher-focused (TF) teaching approach and Student Engagement (SE).

Research Objective 5

- H18: Student Engagement (SE) mediates the relationship between Surface Approach (SA) and Academic Achievement (AA).
- H19: Student Engagement (SE) mediates the relationship between Deep Approach (DA) and Academic Achievement (AA).

Research Objective 6

- H20: Gender moderate the relationships between Approaches to Teaching (AT) and Student Approaches to Learning (SAL) in predicting Student Engagement (SE) and Academic Achievement (AA).

1.5 Significance of Study

A better Teaching and Learning model (TL Engagement Model) for higher learning can enhance the literature on Student Engagement (SE), teaching and learning approaches in higher learning institutions. The exploration of teaching and learning approaches combined together with Student Engagement (SE) provides a better understanding of the relationships among the variables. Furthermore, the direct and indirect effects of teaching and learning approaches on Student Engagement (SE) explored in this study

provide useful information for the implementation of practices or policies in higher learning institutions.

The findings from this study will either support or contradict the early results pertaining to the issues concerning the relationships among teaching and learning approaches and Student Engagement (SE). The investigation of the relationship among these variables may also provide insights, new knowledge or new approaches to students, lecturers, administrators and policymakers.

Furthermore, this study attempts to provide a new approach in measuring Approaches to Teaching (AT) and Student Engagement (SE). Prior to this study, the measurement of approaches to teaching were normally based on the lecturer's self-report (Trigwell et al., 1999). Leung, Wang and David Chan (2007) suggested the idea of measuring Approaches to Teaching (AT) through the perception of students. This study expands on the idea of Leung et al. (2007) by developing a suitable tool to measure the Approaches to Teaching (AT) through student's perception. This attempt further strengthens the measurement of Approaches to Teaching (AT) based on student's perception. The established tool may simplify future studies on teaching and learning processes in higher learning institutions.

The concept of Student Engagement (SE) as a learning process indicator has not been fully tested in Malaysian higher educational institutions. The effectiveness and applicability of this concept to assess the performance of Malaysian undergraduates has not been studied widely. This study will help us to identify a proper construct that is better suited to the local context. The possibility that Student Engagement (SE) functions as an alternative in measuring learning outcomes will also be discussed. Subsequently, the current study will enhance the knowledge in understanding this learning process indicator.

This study will raise awareness concerning engaging students in the teaching and learning process among the relevant parties in the ministry, universities and faculties, as well as the undergraduates themselves. A Teaching and Learning Engagement model (TL Engagement model) for higher learning will be developed in an attempt to provide a full picture and explanation of the questions raised. The model will provide insights and an overview to guide and assist lecturers in designing teaching approaches. The research findings can provide a basis for designing training programmes for lecturers in higher institutions. Undeniably, many educators in Malaysia have been well trained and equipped to deliver their knowledge to the learner. However, the issue of Student Engagement (SE) in the learning process is less emphasized and has become the cause of ineffective teaching. As Angelo and Cross pointed out, "learning can – and often does – occur without teaching, but teaching cannot occur without learning; teaching without learning is just talking" (1993, p. 3). Hence, the awareness to engage students' needs to become part of the lesson planning to ensure better learning quality.

The findings in this study will also provide a reference for the relevant parties involved in tertiary education. One of the ways to improve the teaching and learning processes is to increase their involvement (Astin, 1999). Therefore, how to increase the involvement of students in classrooms. The researcher believes that the results of this research will expand the theory on the student-focused approach, deep learning, and provide some meaningful information regarding the use of these approaches in solving the challenges in teaching and learning in higher institutions.

Lastly, this research also aims to study an urgent question concerning how teaching and learning approaches in higher learning institutions are related to the quality of the graduates. By addressing this question, it is hoped that a better understanding can be achieved concerning the teaching and learning approaches and their relationship with Student Engagement (SE) in tertiary education. The findings in this research also provide important information pertaining to how to enhance the quality of teaching and learning in higher learning institutions to the Ministry of Education (MOE), lecturers, and university students. With theoretical justifiable support and empirical evidence, it helps to convince the policymakers, administrators and lecturers to choose the right action to achieve their goals.

1.6 Limitations of Study

Some potential limitations of the current research design should be noted. First, the progression of Student Engagement (SE) among undergraduates cannot be observed without longitudinal data (Astin, 2003). In other words, the level of Student Engagement (SE) measured in this study may relate to the individual predisposition rather than the effects of teaching and learning approaches. Therefore, a sufficient number of respondents were chosen from different programmes in order to provide an adequate relation between Student Engagement (SE), and the teaching and learning approaches.

Secondly, the use of a self-report questionnaire to assess the level of Student Engagement (SE), teaching and learning approaches, may be subject to measurement bias. In addition, the quantitative approach with predetermined or structured questions does not allow the issue to be probed in depth. However, these problems can be overcome by administering the questionnaire with the assurance of confidentiality. Furthermore, the instrument used in this study was adapted from well-established questionnaires that have been widely used globally with accepted reliability and validity.

Thirdly, the generalizability of the research findings is limited as the study only involved the population from one *Research University* (RU), namely,

University Putra Malaysia (UPM). In addition, the institution is another factor that may affect the engagement level of the undergraduates (Errey & Wood, 2011); therefore, the generalization of the TL Engagement Model in this study to other Research Universities (RUs) is not supported. However, since the enrolment of students in these Research Universities (RUs) is centralized and controlled by the Ministry of Education (MOE), and the characteristics and qualification of students in these Research Universities (RUs) share some similarities, the findings of this study can also provide some information pertaining to the research variables for other Research Universities (RUs).

1.7 Operational Definition

1.7.1 Student Engagement

In this study, Student Engagement (SE) refers to the amount of physical and psychological energy that the student devotes to the academic experience postulated by Astin (1999). Student Engagement (SE) has five constructs: *Student-faculty Interaction*, *Active Learning*, *Deepening of Learning*, *Capacity for Life-long Learning*, and *Experiences with Diversity (EWD)*.

Student Engagement (SE) in this study is measured based on the modified version of the *College Student Experiences Questionnaire (CSEQ)*, which reflects the engagement level of students in higher learning institutions.

1.7.2 Academic Achievement

Scale of Academic Achievement (AA) in this study was determined by the final examination grades of the course obtained by the respective respondents in this study, for the second semester of 2012/2013.

1.7.3 Approaches to Teaching

This study selected the Approaches to Teaching (AT) proposed by Fox (1983), Leung, Wang and Olomolaiye (2008b), and Trigwell, Prosser and Ginns (2005). Approaches to Teaching (AT) refer to behaviour and media used during interaction with learners suggested by Leung, Wang and Olomolaiye (2008b). This study also employed in this study in which he differentiated teaching approaches into Teacher-focused (TF) and Student-focused (SF) constructs. The *Approaches to Teaching Inventory (ATI)* was modified into the students' perception

version and used to measure the constructs of Teacher-focused (TF) and Student-focused (SF).

1.7.4 Student Approaches to Learning

In this study, Student Approaches to Learning (SAL) was measured using the modified version of *Revised Study Process Questionnaire – 2 factors* (R-SPQ-2F) (Biggs, Kember, & Leung, 2001). Student Approaches to Learning (SAL) reflects the interaction between a student's current motivation and the teaching context and is modifiable (Biggs & Moore, 1993). Current research employs the "two-factor SAL", which consists of the Surface Approach (SA) and Deep Approach (DA).

1.7.5 Research University (RU)

The term research university was introduced into Malaysia through the *National Higher Education Strategic Plan: Laying the Foundation Beyond 2020* (The Plan) in year 2007. The characteristics of RUs introduced in this Plan included the field of studies, which focus on research, competitive enrolment, which ensures the quality of students and lecturers, and the ratio of undergraduate and postgraduate, which is 50:50.

Currently, there are five RUs in Malaysia – Universiti Malaya (UM), Universiti Sains Malaysia (USM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM), and Universiti Technology Malaysia (UTM). The selected Research University (RU) in this study was Universiti Putra Malaysia (UPM).

1.8 Summary

This chapter provided the background information about why the issue of Student Engagement (SE) is of growing importance in higher learning education. Notably, as in other parts of the world, problems of learner disengagement have worried and alarmed the Malaysian society.

A brief introduction of the research design, together with the teaching and learning approaches as determinant factors towards Student Engagement (SE), highlighted the full picture of this research. The main aim, specific objectives, research questions and hypotheses have been stated clearly and precisely to guide the following discussion. The significance of contribution comes from the exploration, understanding and application of individual concepts, and the correlational relationships of the constructs and path model, which depicted the teaching and learning phenomenon in higher learning education. Lastly, the operational definitions of the main variables were explained.

REFERENCES

- Adediwura, A. A., & Tayo, B. (2007). Perception of teachers' knowledge, attitude and teaching skills as predictor of academic performance in Nigerian secondary schools. *Educational Research and Review*, 2 (7), 165-171.
- Andy Field (2005). *Discovering statistics using SPSS, 2nd edition*. London: Sage Publication.
- Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed). San Francisco: Jossey-Bass.
- Anis Maesin, Mahani Mansor, Latisha Asmaak Shafie, & Surina Nayan. (2009). A study of collaborative learning among Malaysian undergraduates. *Asian social journal*, 5(7), 70-76.
- Arteche, A., Chamorro-Premuzic, T., Ackerman, P., & Furnham, A. (2009). Typical intellectual engagement as a byproduct of openness, learning approaches, and self-assessed intelligence. *Educational Psychology*, 29(3), 357-367.
- Ary, D., Jacobs, L. C., & Sorensen, C. (2008). *Introduction to research in education, 8th edition*. USA: Wadsworth.
- Astin, A. W. (1985). *Achieving Educational Excellence: A Critical Analysis of Priorities and Practices in Higher Education*. San Francisco, CA: Jossey Bass.
- Astin, A. W., Parrot, S. A., Korn, W. S., & Sax, L. J. (1997). *The American Freshman: Thirty year trends 1966-1996*. LA: Higher Education Research Institute.
- Astin, A. W. (1999, originally published July 1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 518-529.
- Astin, A. W. (2003). Studying how college affects students. *About Campus*, 8, 21-28.
- Astin, A. W., & Schroeder, C. (2003). What matters to Alexander Astin? A conversation with higher education's senior scholar. *About Campus*, 8(5), 11-18. doi: 10.1002/abc.85

- Balatchandirane, G. (2007). *Gender discrimination in education and economic development: A case study of Asia* (Monograph series). Japan: Institute of Developing Economies, Japan External Trade Organization. Retrieved from <http://www.ide.go.jp/English/Publish/Download/Vrf/pdf/426.pdf>.
- Barkley, E. F. (2010). *Student engagement techniques: A handbook for college faculty*. USA: Jossey-Bass.
- Baron, R. B., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bartlett, II, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational research: Determining appropriate sample size in survey research. *Information Technology, Learning, and Performance Journal*, 19(1), 43-50.
- Behling, O., & Law, K. S. (2000). *Translating questionnaires and other research instruments: problems and solutions*. Sage University Papers Series on Qualitative Applications in Social Sciences, 07-131. Thousand Oaks, CA: Sage.
- Betoret, F. D., & Artiga, A. G. (2011). The relationship among student basic need satisfaction, approaches to learning, reporting of avoidance strategies and achievement. *Electronic Journal of Research in Educational Psychology*, 9(2), 463-496.
- Biggs, J. B. (1987). *Student approaches to learning and studying*. Hawthorn, Vic: Australia Council for Edu. Research.
- Biggs, J. B. (1989). Approaches to the enhancement of tertiary teaching, *Higher Education Research and Development*, 8, 7-25.
- Biggs, J. B. (1993). From theory to practice: a cognitive system approach. *Higher education research and development*, 12, 73-85.
- Biggs, J. B., & Catherine Tang. (2007). *Teaching for quality learning at university (3rd Edition)*. London: McGraw-Hill Education.
- Biggs, J. B., Kember, D., & Leung, D. Y. P. (2001). The revised two-factor Study Process Questionnaire: R-SPQ-2F. *British Journal of Educational Psychology*, 71, 133-149.
- Biggs, J. B., & Moore, P. J. (1993). *The process of learning (3rd edition)*. Australia: Prentice Hall.

- Bowen, S. (2005). *Engaged learning: Are we all on the same page? Peer Review*. Retrieved from: http://findarticles.com/p/articles/mi_qa4115/is_200501/ai_n13634584/?tag=content;col1.
- Brighthouse, H. (2008). Grade inflation and grade variation: All the fuss about?. In Hunt, L. H. (ed.). *Grade inflation: Academic standards in higher education* (pp.73 – 92). USA: State University of New York Press, Albany.
- Brown, R. D. (1985). Review of College Student Experiences Questionnaire. In J.V. Mitchell, Jr. (Ed.), *The ninth mental measurements yearbook*, Vol. 1 (pp. 365-366). Lincoln, NE: University of Nebraska, Buros Institute of Mental Measurements.
- Bundy, A. (ed.) (2004). *Australian and New Zealand information literacy framework, principles, standards and practice* (2nd ed.). Adelaide: ANZIIL and CAUL.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd Ed.). New York: Routledge.
- Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in Higher Education*, 47(1), 1-32.
- Cerin, E. (2010). Statistical approaches to testing the relationships of the built environment with resident-level physical activity behavior and health outcomes in cross-sectional studies with cluster sampling. *Journal of Planning Literature*, 26(2) 151-167.
- Chalmers, D., & Fuller, R. (1996). *Teaching for learning at University*. Britain: Kogan Page.
- Chammoro-Premuzic, T., & Furnham, A. (2008). Personality, intelligence and approaches to learning as predictors of academic performance. *Personality and Individual Differences*, 44, 1596–1603.
- Chickering, A.W. (1969). *Student-faculty relationships: Bedrock for college governance*. Michigan: National Institute of Mental Health.
- Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, 39(7), 3-7.
- Chickering, A. W., & Kuh, G. D. (2005). *Promoting student success: Creating conditions so every student can learn* (Occasional Paper No. 3). Bloomington, Indiana: Indiana University Center for Postsecondary Research.

- Coates, H. (2006). *Student engagement in campus-based and online education*. London: Routledge.
- Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). New York: John Wiley & Sons.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Creswell, J. W. (2008). *Educational Research* (3rd Edition). USA: Pearson
- Dalen, V. (1973). *Understanding educational research: an introduction*. New York: McGraw Hill.
- Daluba, N. E. (2013). Effect of Demonstration Method of Teaching on Students' Achievement in Agricultural Science. *World Journal of Education*, 3(6), 1-7.
- Dasari, B. (2009). Hong Kong students' approaches to learning: Cross-cultural comparisons. *US-China Education Review*, 6(12), 46-58.
- DeCoster, D. A. (1989). Review of College Student Experiences Questionnaire. In J. C. Conoley and J. J. Kramer (Eds.), *The tenth mental measurements yearbook* (pp. 197-199). Lincoln, NE: University of Nebraska, Burors Institute of Mental Measurements.
- Diseth, A. (2003). Personality and approaches to learning as predictors of academic achievement. *European Journal of Personality*, 17, 143–155.
- Diseth, A. (2007). Approaches to learning, course experience and examination grade among undergraduate psychology students: testing of mediator effects and construct validity. *Studies in Higher Education*, 32(3), 373–388.
- Economic Planning Unit. (2010). Tenth Malaysia Plan 2011-2015. Retrieved from http://www.epu.gov.my/epu-theme/RMKE10/rmke10_english.html.
- Edgerton, R. (1997). *Higher education white paper*. Pew Charitable Trusts. Retrieved from http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCkQFjAA&url=http%3A%2F%2Fwww.faculty.umb.edu%2Fjohn_saltmarsh%2Fresources%2FEdgerton%2520Higher%2520Education%2520White%2520Paper.rtf&ei=R4V_UoH8KsHTrQea5oGIDw&usq=AFQjCNH7-ALqyAKbSXGGUTsyxm9jRjWaOA&bvm=bv.56146854,d.bmk

- Ellis, R. A., Goodyear, P., Prosser, M. & O'Hara, A. (2006). How and what university students learn through online and face-to-face discussion: conceptions, intentions and approaches. *Journal of Computer Assisted Learning*, 22, 244–256.
- Elvis M. G. (2013). Teaching Methods and Students' Academic Performance. *International Journal of Humanities and Social Science Invention*, 2(9), 29-35.
- Engle, J., & Tinto, V. (2008). *Moving beyond success*. Washington, D.C.: The Pell Institute.
- Entwistle, N. (1987). *Understanding classroom learning*. London: Hodder and Stoughton.
- Entwistle, N., & Ramsden, P. (1983). *Understanding student learning*. London: Croom Helm.
- Errey, R., & Wood, G. (2011). Lessons from a student engagement pilot study. *Australian universities' review*, 53(1), 21-34.
- Ewell, P. T. (2002). *An analysis of relationships between NSSE and selected student learning outcomes measures for seniors attending public institutions in South Dakota*. Boulder, CO: National Center for Higher Education Management Systems.
- Ewell, P. T., & Jones, D. P. (1994). Data, indicators, and the national center for higher education management systems. *New Directions for Institutional Research*, 82.
- Ewell, P. T., & Jones, D. P. (1996). *Indicators of "good practice" in undergraduate education: A handbook for development and implementation*. Boulder, CO: National Center for Higher Education Management Systems.
- Falkenberg, S. (1996). Grade inflation. Retrieved from Eastern Kentucky University Website, <http://people.eku.edu/falkenbergs/grdinfla.htm>
- Farrell, J. B., (2009). *Active Learning: Theories and Research*. Retrieved from The Lookstein Center http://www.lookstein.org/online_journal.php?id=260.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.

- Fauziah Md. Jaafar, Rosna Awang Hashim, & Tengku Faekah Tengku Ariffin. (2012). Malaysian University Student Learning Involvement Scale (MUSLIS): Validation of a student engagement model. *Malaysian Journal of Learning and Instruction*, 9, 15-30.
- Fox, A., Stevenson, L., Connelly, P., Duff, A., & Dunlop, A. (2010). Peer-mentoring undergraduate accounting students: The influence on approaches to learning and academic performance. *Active Learning in Higher Education*, 11(2), 145–156. doi: 10.1177/1469787410365650
- Fox, D. (1983). Personal theories of teaching. *Studies in Higher Education*, 8, 151–163.
- Fraenkel, J. R., & Wallen, N. E. (2012). *How to Design and Evaluate Research in Education, 8th Edition*. USA: McGraw – Hill.
- Fuller, M. B., Wilson, M. A., & Tobin, R. M. (2011). The national survey of student engagement as a predictor of undergraduate GPA: a cross-sectional and longitudinal examination. *Assessment & Evaluation in Higher Education*, 36(6), 735–748.
- Fung, L. Y. (2010). A study on the learning approaches of Malaysian students in relation to English language acquisition. *American Journal of Scientific Research*, 9, 5-11.
- Gay, J. R., Mills, G. E., & Airasian, P. W. (2012). *Educational Research: Competencies for Analysis and Applications (10th Edition)*. Pearson: USA.
- George, D., & Mallery, P. (2009). *SPSS for windows step by step: A simple guide and reference 16.0 update*. USA: Pearson Education Inc.
- Gibbs, G. (1992). *Improving the quality of student learning*, Technical and Educational Services: Bristol.
- Gibbs, G., & Coffey, M. (2004). The impact of training of university teachers on their skills, their approaches to teaching and the approach to learning of their students. *Active Learning*, 5, 87–100.
- Goh, P. S. C. (2005). *Perceptions of learning environments, learning approaches, and learning outcomes a study of private higher education students in Malaysia from twinning programmes*. Doctoral dissertation, University of Adelaide: Australia. Retrieved from <http://digital.library.adelaide.edu.au/dspace/bitstream/2440/37753/2/01front.pdf>

- Goh, P. S. C. (2006, November). *Obstacles to learning in students from twinning programs in Malaysia*. Paper presented at the AFERA conference, Hong Kong. Retrieved from, http://edisdat.ied.edu.hk/pubarch/b15907314/full_paper/1470178009.pdf.
- Goh, P. S. C. (2008). Teaching practices that hinder the deep approaches to learning of twinning programme students in Malaysia: A qualitative perspective. *The Asia-Pacific Education Researcher*, 17, (1), 63-73.
- Gonyea, R. M., Kish, K. A., Kuh, G. D., Muthiah, R. N., & Thomas, A. D. (2003). *College Student Experiences Questionnaire: Norms for the fourth edition*. Bloomington, IN: Indiana University Center for Postsecondary Research, Policy, and Planning.
- Gordon, J., Ludlum, J., & Hoey, J. J. (2008). Validating NSSE against student outcomes: Are they related? *Research in Higher Education*, 49(1), 19–39.
- Gow, L., & Kember, D. (1993), Conceptions of teaching and their relationship to student learning. *British Journal of Educational Psychology*, 63, 20–23. doi: 10.1111/j.2044-8279.1993.tb01039.x
- Graunke, S. S., & Woosley, S. A. (2005). An exploration of the factors that affect the academic success of college sophomores. *College Student Journal*, 39 (2), 367-376.
- Hafeez, A., & Mardell, A. W. (2007). Students' academic success and its association to student involvement with learning and relationships with faculty and peers. *College Student Journal*, 41(4), 1192-1202.
- Hair JR. J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: seventh edition*. USA: Prentice Hall.
- Hanin Naziha Hasnor, Zaiton Ahmad & Norshidah Nordin. (2013). The relationship between learning approaches and academic achievement among INTEC students, UiTM Shah Alam. *Procedia - Social and Behavioral Sciences*, 90, 178 – 186.
- Hinton, P. R., Brownlow, C., McMurray, I., & Cozens, B. (2004). *SPSS explained*. London: Routledge.
- Ho, R. (2006). *Handbook of univariate and multivariate data analysis and interpretation with SPSS*. USA: Taylor & Francis Group.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the

child-clinical and pediatric psychology literature [electronic version].
Journal of Consulting and clinical Psychology, 65(4), 599-610.

- Hu, S. & Kuh, G. D. (2002). Being (dis)engaged in educationally purposeful activities: The influences of student and institutional characteristics. *Research in Higher Education*, 43(5), 555-575.
- Hu, S., Kuh, G. D., & Gayles, J. G. (2007). Engaging undergraduate students in research activities: Are research universities doing a better job? *Innovative Higher Education*, 32, 167-177. doi: 10.1007/s10755-007-9043-y
- Hu, S., Kuh, G. D., & Li, S. (2008). The effects of engagement in inquiry-oriented activities on student learning and personal development. *Innovative Higher Education*, 33, 71-81. doi: 10.1007/s10755-008-9066-z.
- Jewels, T., & Ford, M. (2004). *A single case study approach to teaching: effects on learning and understanding*. Retrieved from : <http://informingscience.org/proceedings/InSITE2004/058jewel.pdf>.
- Johnson, V. E. (2006). Grading problems in higher education. *The Review of Higher Education*, 30(1), 76-77.
- Jones, R. D. (2009). *Student engagement teachers handbook*. Retrieved from <http://www.leadered.com/pdf/Student%20Engage%20handbook%20excerpt.pdf>
- Jong, S. K. (2005). The Effects of a Constructivist Teaching Approach on Student Academic Achievement, Self-concept, and Learning Strategies. *Asia Pacific Education Review*, 6(1), 7-19.
- Kazmi, A. (2010). Sleepwalking through undergrad: Using student engagement as an institutional alarm clock. *College Quarterly*, 13(1), 1-15.
- Kek, Y. C., Darmawan, I. G. N., & Chen, Y. S. (2007). Family, learning environments, learning approaches, and student outcomes in a Malaysian private university. *International Education Journal*, 8(2), 318-336.
- Kelly, M. E., & Tak, S. H. (1998). Borderless education and teaching and learning cultures: The case of Hong Kong. *Australian Universities' Review*, 41 (1), 26-33.
- Kember, D. (1997). A reconceptualization of the research into university academics' conceptions of teaching. *Learn. Instr.*, 7(3), 255-275.

- Kember, D. (2000). Misconceptions about the learning approaches, motivation and study practices of Asian students. *Higher Education*, 40(1), 99-121, doi: 10.1023/A:1004036826490.
- Kline, R. B. (2011). *Principles and Practice of Structural Equation Modeling*, 3rd edition. New York: The Guilford Press.
- Kohn, A. (2008). The Dangerous Myth of Grade Inflation. In Hunt, L. H. (ed.). *Grade inflation: Academic standards in higher education* (pp.1 – 12). USA: State University of New York Press, Albany.
- Krause, K. L., & Coates, H. (2008). Students' engagement in first-year university. *Assessment & Evaluation in Higher Education*, 33(5), 493–505.
- Krause, K. L., McInnis, C., & Welle, C. (2003, Nov). *Out-of-class engagement in undergraduate learning communities: The role and nature of peer interaction*. Paper presented at the Annual Meeting of the Association for the Study of Higher education, Portland.
- Krejcie, R. V., & Morgan D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30, 607-610.
- Kuh, G. D. (1998). How are we doing? Tracking the quality of undergraduate experience from the 1960s to the present. *Review of higher education*, 21(2), 90-120.
- Kuh, G. D. (1999). Another look at the fourth edition of CSEQ. *Assessment Update*, 11(2), 13-14.
- Kuh, G. D. (2001a). Assessing what really matters to student learning: Inside the National Survey of Student Engagement. *Change*, 33(3), 10-17.
- Kuh, G. D. (2001b). *The National Survey of Student Engagement: Conceptual framework and overview of psychometric properties*. Bloomington: Indiana University Center for Postsecondary Research. Retrieved from http://nsse.iub.edu/pdf/conceptual_framework_2003.pdf.
- Kuh, G. D. (2003). What we're learning about student engagement from NSSE. *Change*, 35(2), 24–32.
- Kuh, G. D. (2009). The National Survey of Student Engagement: Conceptual and empirical foundations. In P. D. Umbach, *New directions for institutional research* (pp. 5-20). Wiley InterScience. doi: 10.1002/ir.
- Kuh, G. D., Chen, D., & Nelson Laird T. F. (2007). Why teacher-scholars matter. *Liberal Education*, 40-45.

- Kuh, G. D., & Hu, S. (2001). Learning productivity at research universities. *The Journal of Higher Education*, 72(1), 1-28.
- Kuh, G. D., Nelson Laird, T. F., & Umbach, P. D. (2004). Aligning faculty activities. *Liberal Education*, 90(4), 24-31.
- Kuh, G. D., Pace, C. R., & Vesper, N. (1997). The development of process indicators to estimate student gains associated with good practices in undergraduate education. *Research in Higher Education*, 38(4), 435-454.
- Kuh, G. D., & Umbach, P. D. (2005). Experiencing diversity. *Liberal Education*, 14-21.
- Latisha Asmaak, S., & Surina, N. (2010). Employability awareness among Malaysian undergraduates. *International Journal of Business and Management*, 5 (8), 119-123.
- Leech, N. L., Barret, K. C., and Morgan G. A. (2008). *SPSS for intermediate statistics, use and interpretation, 3rd edition*. New York: Lawrence Erlbaum Associates.
- Leung, M. Y., Ng, S. T., & Li, Y. X. (2004). Evaluating the learning approaches of construction students in Hong Kong through a matrix framework. *Issues Eng. Educ. Pract.*, 130(3), 189–196.
- Leung, M. Y., Li, J. Y., Fang, Z., Lu, X. H., & Lu, M. (2006). Learning approaches of construction engineering students: A comparative study between Hong Kong and Mainland China. *Journal for Education in the Built Environment*, 1(1), 112-131.
- Leung, M. Y., Wang, Y., & David Chan, K. K. (2007). Structural surface-achieving model in the teaching and learning process for construction engineering students. *Journal of Professional Issues in Engineering Education and Practice*, 327-339.
- Leung, M. Y., Lu, X. H., Chen, D. Y., & Lu, M. (2008a). Impact of teaching approaches in construction engineering education: A comparative study between Hong Kong and Mainland China. *Journal of Engineering Education*, 97(2), 135-145.
- Leung M. Y., Wang, Y., and Olomolaiye, P. (2008b). Models of Causal Relationships of Critical Teaching–Surface Learning Process Factors amongst Construction Engineering Undergraduates. *Journal for Education in the Built Environment*, 3(1), 49-67.

- Liew, H. C. (2009). *An investigation into the factors affecting second language learners' classroom participation*. (Unpublished Ph.D. Degree Dissertation). Fakulti Pendidikan Universiti Teknologi Malaysia, Malaysia.
- Ling, P., Arger, G., Filonenko, I., Chua, H., & Yin, C. (2005). Approaches to study: A comparison of Malaysian and Australian students, in Higher education in a changing world, Proceedings of the 28th HERDSA Annual Conference, 276-286. Retrieved from HERDSA website: http://www.herdsa.org.au/wp-content/uploads/conference/2005/papers/ling_p.pdf
- Lovatt J., Finlayson O. E., & James P. (2007). *Evaluation of student engagement with two learning supports in the teaching of 1st year undergraduate chemistry*. Retrieved from http://www.rsc.org/images/Finlayson_tcm18-103986.pdf. on 24th March 2011.
- Lueddeke, G. (2003). Professionalising teaching practice in higher education: a study of disciplinary variation and 'teaching-scholarship', *Studies in Higher Education*, 28, 213–228.
- Malakolunthu, S., & Joshua, A. (2012). Learning approaches of undergraduate computer technology students: Strategies for improvement. *Malaysian Journal of Learning and Instruction*, 9, 1-14.
- Malie, S., & Akir, O. (2012). Bridging the gaps between learning and teaching through recognition of students' learning approaches: A case study. *Research in Education*, 87, 75-94.
- Mansor, A. T. (2007). Facilitator and learner's understanding on Roger's core conditions of a person centered counseling (and learning) in the student centered learning environment. In Sidek Hj. Ab. Aziz. (Eds.), *Strategi dan kaedah pengajaran dan pembelajaran*. (pp. 167-175). Serdang: Pusat Pembangunan Akademik.
- Maria Chong Abdullah, Samsilah Roslan, & Tajularipin Sulaiman (2011). *Malaysian Education Dean's Council Journal*, 8, 101-115. Retrieved from [http://www.fp.utm.my/medc/journals/volume%206/h\)%20Pembelajaran%20Berpusatkan%20Pelajar%20di%20IPT-1.pdf](http://www.fp.utm.my/medc/journals/volume%206/h)%20Pembelajaran%20Berpusatkan%20Pelajar%20di%20IPT-1.pdf)
- Marton, F., & Säljö, R. (1976). On qualitative differences in learning I. Outcome and process, *British Journal of Educational Psychology*, 46, 4-11.

- Marton, F., Wen, Q. F., & Wong, K. C. (2005). 'Read a hundred times and the meaning will appear ...' Changes in Chinese University students' views of the temporal structure of learning. *Higher Education*, 49, 291–318. doi: 10.1007/s10734-004-6667-z
- McCammon, S. (1989). Review of College Student Experiences Questionnaire. In J. C. Conoley and J. J. Kramer (Eds.), *The tenth mental measurements yearbook* (pp. 199-201). Lincoln, NE: University of Nebraska, Buros Institute of Mental Measurements.
- McCarthy, S. N., Souza, L. K., & Jaafar, J. (2010). Rites of passage: A comparison of US, Malaysian and Brazilian adolescents. *US-China Education Review*, 7(11), 88-98.
- McCormick, A. C., Pike, G. R., Kuh, G. D., & Chen P. D. (2009). Comparing the utility of the 2000 and 2005 carnegie classification systems in research on students' college experiences and outcomes. *Res High Educ.*, 50, 144-167. doi: 10.1007/s11162-008-9112-9.
- McInnis, C. (2001). *Signs of disengagement? The changing undergraduate experience in Australian universities*. Melbourne: Centre for the Study of Higher Education.
- Mimirinis, M., & Bhattacharya, M. (2007). Design of virtual learning environments for deep learning. *Jl. of Interactive Learning Research*, 18 (1), 55-64.
- Ministry of Higher Education. (2007). *National Higher Education Strategic Plan: Laying the Foundation Beyond 2020*. Retrieved from MOHE website: <http://www.mohe.gov.my/transformasi>.
- Mitchell, J. V., Jr. (Ed.). (1983). *Tests in print III: An index to tests, test reviews, and literature on specific tests*. Lincoln, NE: University of Nebraska, Buros Institute of Mental Measurements.
- Muhammad Ridhuan Tony Lim Abdullah & Saedah Siraj. (2011). The four C's of mobile capability as guiding principle for Mlearning design: A shift of learners' focus away from technology. *Masalah Pendidikan Edisi Khas 2011*, 105-114.
- National Institute of Education (1984). *Involvement in learning: Realizing the potential of American higher education*. Washington, D.C.: U.S. Department of Education.
- Nelson Laird, T. F., & Kuh, G. D. (2005). Student experiences with information technology and their relationship to other aspects of student engagement. *Research in Higher Education*, 46(2), doi: 10.1007/s 11162-004-1600-y

- Nelson Laird, T. F., Chen, D., & Kuh, G. D. (2008). Classroom practices at institutions with higher than expected persistence rates: What student engagement data tell us. In Wiley InterScience, *New directions for teaching and learning* (pp. 85-99). doi: 10.1002/tl.327.
- Nelson Laird, T. F., Shoup, R., & Kuh, G. D. (2005, May). *Measuring deep approaches to learning using the National Survey of Student Engagement*. Paper presented at the Annual Meeting of the Association for Institutional Research, Chicago, IL.
- Nijhuis, J. F. H., Segers, M. S. R., & Gijssels, W. H. (2005). Influence of redesigning a learning environment on student perceptions and learning strategies. *Learning Environments Research*, 8, 67–93.
- Nik Mustapha R. Abdullah. (2007). Institusi pengajian tinggi penjana pembangunan modal insane kelas pertama. In Sidek Hj. Ab. Aziz. (Eds.), *Isu semasa dalam pendidikan tinggi* (pp. 1-14). Serdang: Pusat Pembangunan Akademik.
- Noor Mala Ibrahim & Nor Hidayah Ramli. (2010) *A comparative study on the learning styles Of second year education (living skills) students and the teaching styles of their lecturers*, 1-7. Abstract retrieved from <http://eprints.utm.my/11028/>.
- Norhayati Maket. (2011). Oktober ipad fest: A report on a sharing session for an ipad pilot project. *Jurnal Pendidikan (Edisi khas)*, 66-77.
- Norman, G. R. & Streiner, D. L. (2003). *PDQ statistics, third edition*. Canada: BC
- Norzaini Azman, Manisah Mohd Ali, Abdul Halim Tamuri, & Zalizan Mohd Jelas. (2005). Effective higher education practices – A survey of student engagement. *Malaysian Journal of Learning & Instruction*, 2, 95–119.
- NSSE. (2007). *Experiences that matter: Enhancing student learning and success (NSSE Annual Report 2007)*. Retrieved from National Survey of Student Engagement Website http://nsse.iub.edu/NSSE_2007_Annual_Report/docs/withhold/NSS E_2007_Annual_Report.pdf
- NSSE. (2009). *Factor analysis 2009 internal structure for deep learning validity - construct validity*. Retrieved from Retrieved from National Survey of Student Engagement Website nsse.iub.edu/links/psychometric_portfolio.
- NSSE. (2011). *Fostering student engagement campuswide—annual results 2011*. Bloomington, IN: Indiana University Center for Postsecondary Research.

- Pace, C. R. (1982). *Achievement and the quality of student effort*. Paper presented at National Commission on Excellent in Education (Washington DC). Retrieved from National Institute for Learning Outcomes Assessment website: <http://www.learningoutcomesassessment.org/documents/CSEQ-AchievementAndTheQualityOfStudentEffort.pdf>
- Pace, C. R. (1984). *Measuring the quality of college student experiences. An account of the development and use of the College Student Experience Questionnaire*. Los Angeles, CA: University of California.
- Pace, C. R. (1990). *The undergraduate: A report of their activities and progress in college in the 1980s*. Los Angeles, CA: University of California.
- Pace, C. R. (1998). Recollection and reflection. In Smart, J. C. (ed.), *Higher education: Handbook of theory and research* (pp. 1-34). London: Kluwer Academic Publisher.
- Pallant, J. (2011). *SPSS survival manual: A step by step guide to data analysis using SPSS* (4th edn.). Australia: Allen & Unwin.
- Pang, M., Ho, T. M., & Man, R. (2009). Learning approaches and outcome-based teaching and learning: A case study in Hong Kong, China. *Journal of Teaching In International Business*, 20, 106–122. doi: 10.1080/08975930902827825.
- Pascarella, E. T., Seifert, T., & Blaich, C. (2010). How effective are the NSSE benchmarks in predicting important educational outcomes? *Change*, 42, 16-22.
- Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco, CA: Jossey-Bass.
- Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students*. San Francisco, CA: Jossey-Bass.
- Pike, G. R. & Kuh, G. D. (2005a). A typology of student engagement for American colleges and universities. *Research in Higher Education*, 46(2), 185-209. doi: 10.1007/s 11162-004-1599-0.
- Pike, G. R. & Kuh, G. D. (2005b). First- and second-generation college students: A comparison of their engagement and intellectual development. *The Journal of Higher Education*, 76(3), 276-300.

- Pike, G. R., Kuh, G. D., & Massa-Mckinley, R. (2008). First-year students' employment, engagement, and academic achievement: Untangling the relationship between work and grades. *NASPA Journal*, 45(4), 560-582.
- Prosser, M. & Millar, R. (1989). The 'how' and 'what' of learning physics, *European Journal of Psychology of Education*, 4, 513-528.
- Prosser, M., & Trigwell, K. (1997). Relations between perceptions of the teaching environment and approaches to teaching. *British Journal of Educational Psychology*, 67, 25-35.
- Prosser, M., & Trigwell, K. (1999). *Understanding learning and teaching: The experience in higher education*. Buckingham: Society for Research into Higher Education and Open Univ. Press.
- Prosser, M., & Trigwell, K. (2004). Development and use of the approaches to teaching inventory. *Educational Psychology Review*, 16(4), 409-424.
- Prosser, M., & Trigwell, K. (2006). Confirmatory factor analysis of the approaches to teaching inventory. *British Journal of Educational Psychology*, 76, 405-419.
- Prosser, M., Martin, E., Trigwell, K., Ramsden, P. & Lueckenhausen, G. (2005). Academics' experiences of understanding of their subject matter and the relationship of this to their experiences of teaching and learning. *Instructional Science*, 33, 137-157.
- Rafiah Salim. (2007). The type of graduates needed in an increasingly globalised world. In Sidek Hj. Ab. Aziz. (Eds.), *Isu semasa dalam pendidikan tinggi* (pp. 21-28). Serdang: Pusat Pembangunan Akademik.
- Raja Maznah Raja Hussain & Gardner, R. (2011). Supporting e-learning: Staff development lessons from university of Malaya and University of Bristol. *Masalah Pendidikan Edisi Khas 2011*, 19-26.
- Ramsden, P. (1987). Improving teaching and learning in higher education: The case for a relational perspective. *Studies in Higher Educ.*, 12(3), 275-286.
- Ramsden, P. (2003). *Learning to teach in Higher Education (2nd edition)*. London: RoutledgeFalmer.
- Rashmat Hashim. (2009). A model of personal epistemology, Self-efficacy and learning styles. *AFBE Journal*, 2(1), 45-57.
- Retherford, R. D., & Minja Kim Choe. (1993). *Statistical models for causal analysis*. USA: John Wiley & Sons, Inc.

- Richardson, J. T. E. (2000). *Researching student learning: Approaches to studying in campus-based and distance education*. Buckingham: SRHE and Open University Press.
- Rodriguez, C. M. (2009). The impact of academic self-concept, expectations and the choice of learning strategy on academic achievement: The case of business students. *Higher Education Research & Development, 28*(5), 523–539.
- Roehling, P. V., Lee, T. V. K., Dykema, S., Quisenberry, B., & Vandlen, C., (2011). Engaging the millennial generation in class discussions. *College Teaching, 59*, 1-6.
- Rollnick, M., Davidowitz, B., Keane, M., Bapoo, A., & Magadla, L. (2008). Students' learning-approach profiles in relation to their university experience and success. *Teaching in Higher Education, 13*(1), 29-42.
- Salisbury, F. A., Karasmanis, S., Robertson, T., Corbin, J., Hulett, H., & Peseta, T. L. (2012). Transforming information literacy conversations to enhance student learning: new curriculum dialogues, *Journal of University Teaching & Learning Practice, 9*(3). Retrieved from: <http://ro.uow.edu.au/jutlp/vol9/iss3/4>
- Shulman, L. S. (2002). Making differences: A table of learning. *Change, 34*(6), 36-44.
- Shumaker, R. E., & Lomax, R. G. (2004). *A beginner's guide to Structural Equation Modeling* (2nd edition). London: Lawrence Erlbaum Associates.
- Siti Maziha, M., & Nik Suryani, N. A. R. (2011). Classroom Participation Patterns: A Case Study of Malaysian Undergraduate Students. *International Journal for Educational Studies, 3*(2), 145-158.
- Smith, S. N. (2001). Approaches to study of three Chinese national groups. *British Journal of Educational Psychology, 71*, 429-441.
- Sultana, A. M. & Nor Erlina, M. Z. (2012). Discrimination against Women in the Developing Countries: A Comparative Study. *International Journal of Social Science and Humanity, 2*(3), 256-259.
- Swanberg, A. B., & Martinsen, Ø. L. (2010). Personality, approaches to learning and achievement. *Educational Psychology, 30*(1), 75–88.
- Tan, M. C. (1990). Some factors influencing student performance in laboratory experimental work in physiology with implications for curriculum deliberation and instructional designs. *Higher Education 19*, 473-479. doi: 10.1007/BF00137009

- Tang, T., & Robinson, T. (2010). Learning approach and perception of learning context in Economics education: a causality test. *The international journal of learning*, 17(2), 21-40.
- Tani, M. (2005). Quiet, but only in class: Reviewing the in-class participation of Asian students. Retrieved from *Higher Education Research and Development Society of Australasia Incorporated (HERDSA)* website:
http://conference.herdsa.org.au/2005/pdf/non_refereed/030.pdf.
- Terenzini, P. T. & Pascarella, E. T. (1990, May). *Twenty years of research on college students: Lessons for future research*. Paper presented at the annual Forum of the Association for Institutional Research, Louisville, KY.
- Thang, S. M. (2005). Comparing approaches to studying of Malaysian distance learners and on-campus learners: Implication to distance education. *Turkish Online Journal of Distance Education-TOJDE*, 6(2), 70-86.
- Thang, S. M. (2009) Investigating autonomy of Malaysian ESL learners: A comparison between public and private universities. *3L; Language, Linguistics and Literature, The Southeast Asian Journal of English Language Studies.*, 15, 97-124.
- Thang, S. M., & Azarina Alias (2007). Investigating readiness for autonomy: A comparison of Malaysian ESL undergraduates of three public universities. *Reflections on English Language Teaching*, 6(1), 1–18.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of current research. *Review of Educational Research*, 45(1), 89-125.
- Tinto, V. (1990). The principles of effective retention. *Journal of The First-Year Experience & Students Transition*, 2(1), 35-48.
- Tinto, V. (1997). Classroom as communities. *Journal of Higher Education*. 68(6), 599-623.
- Tinto, V. (2000). What have we learned about the impact of learning communities on students? *Assessment Update*, 12(2), 1-12.
- Tinto, V., & Goodsell, A. (1993). *The longitudinal study of freshman interest groups at the University of Washington*. Washington DC: NCTLA.
- Tison, E. B., Bateman, T., & Culver, S. M. (2011). Examination of the gender–student engagement relationship at one university. *Assessment & Evaluation in Higher Education*, 36(1), 27–49.

- Trigwell, K. (2002). Approaches to teaching design subjects: A quantitative analysis. *Art, Design and Communication in Higher Education*, 1, 69–80.
- Trigwell, K., & Prosser, M. (1991). Relating learning approaches, perceptions of context and learning outcomes, *Higher Education (Special Edition on Student Learning)*, 22, 251-266.
- Trigwell, K. & Prosser, M. (1996). Changing approaches to teaching: A relational perspective, *Studies in Higher Education*, 21, 275-284.
- Trigwell, K., & Prosser, M. (2004). Development and use of the approaches to teaching Inventory. *Educational Psychology Review*, 16(4), 409-424.
- Trigwell, K., Prosser, M., & Ginns, P. (2005). Phenomenographic pedagogy and a revised Approaches to teaching inventory, *Higher Education Research & Development*, 24 (4), 349–360.
- Trigwell, K., Prosser, M., & Taylor, P. (1994). Qualitative differences in approach to teaching first year science. *Higher Educ.*, 27, 75–84.
- Trigwell, K., Prosser, M., & Waterhouse, F. (1999). Relations between teachers' approaches to teaching and students' approaches to learning. *Higher Education*, 37, 57–70.
- Umbach, P. D., & Wawrzynski, M. R. (2005). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education*, 46 (2), 153-184.
- Universiti Putra Malaysia. (2003). *Akta Universiti dan Kolej Universiti 1971, Perlembagaan Universiti Putra Malaysia, Kaedah Universiti Putra Malaysia (Perkara Akademik)*. Serdang: UPM.
- Universiti Putra Malaysia. (2011). *Polisi & pelan strategic pemantapan pengajaran dan pembelajaran 2011-2013*. Serdang: Pusat Pembangunan Akademik (CADe).
- Walker, R., Smith, R. S., Bond, C., McDonald, F., Reynolds, J., & McMartin, A. (2010). The impact of curriculum change on health sciences first year students' approaches to learning. *Instr Sci*, 38, 707–722. doi: 10.1007/s11251-009-9092-y
- Wan Shahrazad, Wan Rafaei, & Mariam, (2008). Relationship between critical thinking dispositions, perceptions towards teachers, learning approaches and critical thinking skills among university students. *The Journal of Behavioral Science*, 3(1), 122-133.

- Wan Zah Wan Ali. (2000). *Memahami pembelajaran*. Kuala Lumpur: Utusan Publication & Distributors Sdn Bhd.
- Wilding, J., & Andrews, B. (2006). Life goals, approaches to study and performance in an undergraduate cohort. *British Journal of Educational Psychology*, 76, 171–182.
- Yilmaz, M. B., & Orhan, F. (2010). Pre-service English teachers in blended learning environment In respect to their learning approaches. *The Turkish Online Journal of Educational Technology*, 9(1), 157-164.
- Yläne, S. L., Trigwell, K., Nevgia, A., & Ashwin, P. (2006). How approaches to teaching are affected by discipline and teaching context. *Studies in Higher Education*, 31(3), 285–298.
- Yoong, S. (2009). School-based assessments (sba): Implementation and challenges in the Malaysian context. In Peng, Samuel S. Lee and John Chi-kin. *Educational Evaluation in East Asia: Emerging Issues and Challenges* (pp. 94-110). US: Nova Science Publishers.
- Zahariah Mohd Zain, Irfah Najihah Basir Malan, Fauziah Noordin, Zaini Abdullah. (2013). Assessing student approaches to learning: A case of business students at the Faculty of Business Management, Universiti Teknologi MARA. *Procedia - Social and Behavioral Sciences*, 90, 904 – 913.
- Zainal Abidin Sayadi. (2007). *An investigation into first year engineering students' oral classroom participation: A case study*. (Unpublished Master Thesis). UTM [Universiti Teknologi Malaysia], Kuala Lumpur, Malaysia.
- Zarina Mohammad. (2007). Pelaksanaan kaedah SCL dalam pengajaran dan pembelajaran kursus kenegaraan Malaysia di Universiti Putra Malaysia dan kesannya ke atas pelajar dan gred pencapaian pelajar. In Sidek Hj. Ab. Aziz. (Eds.), *Strategi dan kaedah pengajaran dan pembelajaran*. (pp. 286-296). Serdang: Pusat Pembangunan Akademik.
- Zhao, C. M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education*, 45(2), 115-138.
- Zhao, C. M., Carini, R. M., & Kuh, G. D. (2005). Searching for the peach blossom Shangri-La: Student engagement of men and women SMET majors. *Review of Higher Education*, 28 (4), 503–525.
- Zhao, C. M., Kuh, G. D., & Carini, R. M. (2005). A comparison of international student and American student engagement in effective educational practices. *The Journal of Higher Education*, 76(2), 209-231.

Ziguras, C. (2001). Educational technology in transnational higher education in South East Asia: The cultural politics of flexible learning. *Educational Technology & Society*, 4 (4). Retrieved from http://www.ifets.info/journals/4_4/ziguras.html

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