



**UNIVERSITI PUTRA MALAYSIA**

***MODERATING EFFECT OF LEARNING MANAGEMENT SYSTEM  
USAGE ON RELATIONSHIP BETWEEN PREDICTORS AND SOCIAL  
INTERACTION ANXIETY***

**AZRIATY MAZLAN**

**FBMK 2017 34**



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INTERACTION ANXIETY**

By

**AZRIATY BINTI MAZLAN**

**Thesis Submitted to the School of Graduate Studies, University Putra Malaysia, in  
Fulfilment of the Requirement for the Degree of Doctor of Philosophy**

**July 2017**

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

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**July 2017**

**Chairman: Assoc. Prof. Jusang Bolong, PhD**  
**Faculty: Modern Languages and Communication**

The use of communication technology in education has been observed to positively impact to the learning process. Previous studies within the area have mostly focused on the effect of LMS. One example of communication technology on the outcome of learning process that is highly grade-based oriented rather than acquisition of soft skill such as Social Interaction Anxiety. This study specifically investigates predictors namely extensiveness of offline social interaction, perceived ease of use in the LMS, perceived usefulness in the LMS and LMS self-efficacy on the students' and the role of LMS usage as the moderating effect on relationship between all the predictors and social interaction anxiety. Anxiety/Uncertainty Management Theory and Technology Acceptance Model provided the theoretical foundation for this study. The research was designed as quantitative study. The data was collected from 403 undergraduates' students at UniKL campus throughout peninsular Malaysia through self-administered questionnaire over a period of 3-month. Purposive sampling technique was employed in gathering the participants. The questionnaire was adopted from Sübasi (2003), Lederer (2000), Lin (2000), Chang and Cheung (2001), Moon's (2001), Martin, (2008) and Mattick & Clarke, (1998). Examination of the research questions and hypotheses, relevant parts of the survey for each question or hypotheses were done through statistical tests. Descriptive statistics such as frequency, means and standard deviations were used to provide a better understanding of all the variables. Data were analyzed using Structural Equation Model (SEM). Confirmatory Factor Analysis (CFA) was used to examine construct validity and reliability of the model. Findings show that students' social interaction anxiety is significantly related to perceived usefulness in the LMS in a direct relationship. In addition, social interaction anxiety is also significantly related to extensiveness of offline social interaction and perceived ease of use in the LMS when the moderator is present. On the other hand, negative significant correlation between social interaction anxiety is noted when students involved in offline social interaction. Thus, LMS has been identified to have a role in increasing the social interaction among students. With this, it is expected that the findings can improve the learning efficiency within educational environment through the integration of LMS into education system and its effect on the learning outcomes.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia  
sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

**KESAN PENYEDERHANAAN TERHADAP HUBUNGAN ANTARA SISTEM  
PENGURUSAN PEMBELAJARAN DIANTARA RAMALAN RAMALAN DAN  
KEBIMBANGAN INTERAKSI SOSIAL**

Oleh

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Penggunaan teknologi komunikasi dalam pendidikan didapati telah memberi kesan dan impak yang positif dalam proses pembelajaran. Kajian terdahulu dalam bidang ini kebanyakannya memberi tumpuan kepada kesan Sistem Pengurusan Pembelajaran. Kajian ini khusus menyelidik peramal iaitu interaksi sosial di luar talian, persepsi atas kemudahan penggunaan, persepsi atas kemanfaatan dan keberkesanan sendiri pelajar dalam penggunaan sistem pengurusan pembelajaran dan peranan penggunaan sistem pengurusan pembelajaran sebagai kesan penyederhanaan terhadap hubungan antara semua ramalan dan kebimbangan interaksi sosial. Teori Pengurusan Kebimbangan / Ketidakpastian dan model Teori Teknologi Penerimaan merupakan asas teori asa bagi penyelidikan ini. Rekabentuk kajian ini adalah kajian kuantitatif. Data ini diperolehi daripada 403 pelajar mahasiswa di kampus UniKL di seluruh Semenanjung Malaysia, melalui borang soal selidik yang ditadbir sendiri dalam tempoh 3 bulan. Teknik persampelan bertujuan digunakan dalam mengumpul data daripada pelajar. Soalan soal selidik telah diadaptasi dari Subaşı (2003), Lederer (2000), Lin (2000), Chang dan Cheung (2001), Moon (2001), Martin, (2008) dan Mattick & Clarke, (1998). Statistik deskriptif seperti kekerapan, min dan sisihan piawai digunakan untuk memberi pemahaman yang lebih baik terhadap semua pembolehubah. Data dianalisis dengan menggunakan *Structural Equation Model* (SEM). Pengesahan analisis faktor (CFA) telah digunakan untuk memeriksa kesahihan konstruk dan kebolehpercayaan model. Hasil kajian menunjukkan bahawa kebimbangan interaksi sosial pelajar dengan persepsi terhadap kemanfaatan Sistem Pengurusan Pembelajaran (LMS) adalah signifikan secara langsung. Di samping itu, kebimbangan interaksi sosial juga signifikan dengan interaksi sosial di luar talian dan persepsi terhadap kemudahan penggunaan LMS apabila kehadiran moderator penggunaan tinggi dan rendah dalam sistem pengurusan pembelajaran. Sebaliknya, hubungan yang negatif dan signifikan berlaku antara kebimbangan interaksi sosial didapati apabila pelajar terlibat dalam interaksi sosial di luar talian. Oleh itu, sistem pengurusan pembelajaran telah dikenal pasti mempunyai peranan dalam meningkatkan interaksi sosial dalam kalangan pelajar. Dengan ini, dijangka bahawa penemuan ini boleh meningkatkan kecekapan pembelajaran dalam persekitaran pendidikan melalui integrasi sistem pengurusan pembelajaran ke dalam sistem pendidikan dan kesannya terhadap hasil pembelajaran.

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Indeed, earning a doctorate is a singular achievement, but it is not possible without a tremendous support system.

I certify that a Thesis Examination Committee has met on (**21<sup>st</sup> July 2017**) to conduct the final examination of Azriaty Binti Mazlan on her thesis entitled “Moderating Effect of Learning Management System Usage on Relationship Between the Predictors and Social Interaction Anxiety” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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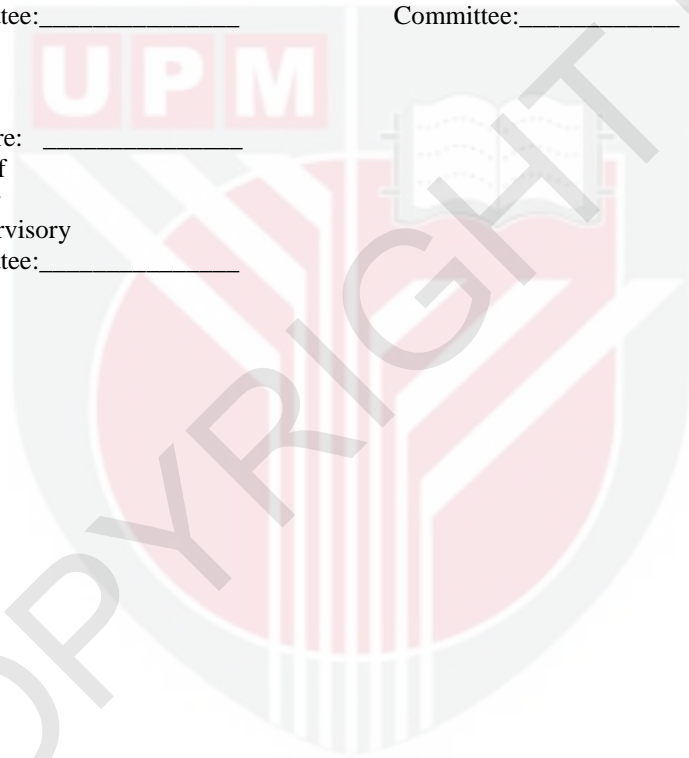
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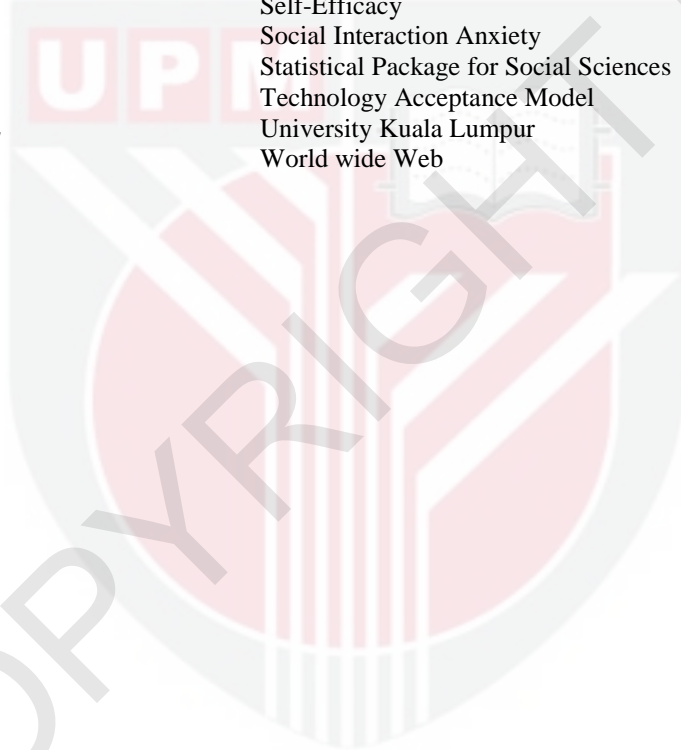
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## LIST OF ABBREVIATIONS

AGFI	Adjusted Goodness of Fit
CFI	Comparative fit Index
CR	Correlation Reliability
GFI	Goodness of fit
IFI	Incremental fit index
IS	Information System
LMS	Learning Management System
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
RMSEA	Root Mean Squared Error of Approximation
SE	Self-Efficacy
SIA	Social Interaction Anxiety
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
UniKL	University Kuala Lumpur
www	World wide Web



# CHAPTER 1

## INTRODUCTION

The first chapter provides general overview of this research. It introduces the Extensiveness of Offline Social Interaction, Perceived Ease of Use, Perceived Usefulness, LMS Self Efficacy (Asynchronous) and LMS Self Efficacy (Synchronous) as a significant issue among Students in University Kuala Lumpur and also the importance of Learning Management System usage concerning the impact of Social Interaction Anxiety among the students. This chapter also presents the statement of research problems, research objectives and significance of the study. Then the chapter will proceed with limitation of study.

### 1.1 Background of the Study

Life in surroundings rich in technology and information in the first decade of the twenty first century is very common to the students. The 21st century is witnessing the field of information and communication technologies are rapidly progressing. Young people are already tuned in to the information age and are participating in the global society. Students' competence to discover and retrieve information effectively transferable skill beneficial for their upcoming life as well as allowing the positive and successful use of the electronic resources while at the university and also improve their soft skill. Students with more experiences in using technology much better in their education level.

The Internet is one of the parts in educational practise today. The academic progressively most depends on the Internet for learning and teaching purposes. According to Kaur (2008), a majority of academic and research institutions equip internet facility to students, educators and researchers. Most lecturers and students were the main users of the Internet. They discovered that the internet is applicable and appropriate for educational activities (Jones, 2002). Some students were discovered enjoying using the internet in conjunction with the physical library (D'Esposito and Gradner, 1999). Moreover as mentioned by Kubey, Lavin and Barrows (2001), internet usage has been viewed to increase student capability in performance. A research study by Sian et al (2013) it shows that students were very much using internet to support and maintain their learning.

E-Learning is an electronic form to support and sustain the teaching and learning process in the university. It is using the technology to transfer the knowledge whether during or outside classroom session. As technology evolves having e-learning is dynamic, to become competitive for knowledge transference. In UniKL, the students and the lecturers are using the Moodle as part their official e-learning system. Lecturers and students can

use this as the platform to interact with each other. In using the Moodle lecturers can provide static learning page, interactive learning page and as well as activity learning page. Static learning means students are provided with reading materials, or lecturers create online quiz, assignment for student to interact with them, online video lesson and activity page is like having discussion using forum, chatting or involve to create wiki.

Communication technology is one of the elements that can change something in the organization. The effect of the technology on education has been considerable, using Internet and computers as effective medium to create interaction between lecturers and students. Being exposed to the technological wonders like computers and the Internet learning, students are able to develop and improve a sense of self-esteem and confidence. According to McKenna & Bargh,(1999); Roberts, Smith, & Clare, (2000); Sherpherd & Edelmann, (2001), the internet may achieve the social need for some who have problem in establishing social relationships, thus aiding social connectedness and providing a sense of belongingness. A research by Papacharissi & Rubin (2000), those who has less feeling of a self-confident in interacting face to face will have a tendency to utilize the internet more for social interaction while those who feel more comfortable with offline interaction tend to use the internet more for informational explorations.

Another concern is about the current online teaching tools of LMS. It came across the students' expectation and satisfaction, so they will fully utilize the tools. In ensuring that education is not considered out dated, then the e-learning is implementing, especially at the tertiary level. As a result, LMS program has been integrated into the university program.

The development of LMS in Malaysia is still new when to compared to western countries. All this while, distance learning has been implemented in this country which allows the students who live far away from the university or the working adults to continue their learning in higher level. According to Hamuy Galaz, (2009) LMS have been extensively used in higher education due to their many benefits including flexible learning times and illimitable distance education.

Today LMS is said to be an alternative to the teaching methods that are still tied to the traditional method. LMS is seen as one of the initiatives of improvement and strengthening of the education system. In Malaysia, the application of e-learning in education has been started when the local universities offer diploma courses and degree programs through distance education. The distance education systems are performed to enable teaching and learning occurs without the constraints of time, place and space of learning through the use of various electronic media. Universiti Sains Malaysia (USM) was the first local university who started the concept of distance education in 1971. In 1998, it has emerged a first virtual university in Malaysia was Universiti Tunku Abdul Razak (UNITAR). UNITAR has offered e-learning program that enables students to conduct online learning.

In year 2011, 26 Higher Education Institutions involved in the study of an LMS, the samples involved e-Learning administrators, lecturers and students from 30 Malaysian HEIs, consist of 20 public HEIs, 7 private HEIs and 3 polytechnics. There were Universiti Kebangsaan Malaysia (UKM), Universiti Sains Malaysia (USM), Universiti Putra Malaysia (UPM), Universiti Malaya (UM), Universiti Teknologi MARA (UiTM), Universiti Teknologi Malaysia (UTM), Universiti Utara Malaysia (UUM), Universiti Pendidikan Sultan Idris (UPSI), Universiti Pertahanan Nasional Malaysia (UPNM), Universiti Islam Antarabangsa Malaysia (UIAM), Universiti Malaysia Sabah (UMS), Universiti Malaysia Sarawak (UNIMAS), Universiti Sains Islam Malaysia (USIM), Universiti Tun Hussain Onn Malaysia (UTHM), Universiti Teknikal Malaysia (UTEM), Universiti Malaysia Kelantan (UMK), Universiti Malaysia Terengganu (UMT), Universiti Malaysia Perlis (UniMAP), Universiti Malaysia Pahang (UMP), Universiti Sultan Zainal Abidin (UniSZA), Asia e-University (AEU), Open University Malaysia (OUM), Multimedia University (MMU), Wawasan Open University (WOU), Sunway University College (SUC), Nilai University College (NUC), HELP University College (HUC), Politeknik Ungku Omar (PUO), Politeknik Shah Alam (PSA) and Politeknik Johor Bahru (PJB).

UniKL is being selected in this study based on the previous research in which the UniKL was not listed in the research by the Ministry of Higher Education in the use of LMS. Since the establishment of the University of Kuala Lumpur, eLearningSpace@unikl is a LMS based on Moodle VLE, developed from a social constructivism perspective. It provides range of functionalities to allow the teaching and learning content creation and delivery, interaction and assessment. LMS enables the lecturers to enhance their face to face teaching and their students' learning by providing an online environment to distribute materials and encourage collaboration and interaction both within and outside the classroom. According to the key performance indicator (KPI) in 2014, UniKL has set the target towards academic staff, to use the e learn activities such as forum, video lectures and online assessment at 80% use. At the same time with the suggestion to use the LMS at such a high usage level, it was found to have slightly affected towards the acceptance of the technology offline social interaction and learning process of the students.

LMS changes the student's experience as well as the lecturer's. Typically, a LMS provides the lecturers with a way to create and deliver content, monitor student online participation, and assess student performance. A LMS may also offer the students with the ability to use interactive features such as threaded discussions, video conferencing and discussion forums. The LMS has been well-known as a digital world today to help the connection between students and lecturers without limits of the conventional teaching method.

According to Supyan Hussin (2004), "the amount of communication between lecturers and students, among students and lecturers has been increasing exponentially through e-mail, chat, forum, and weblog". Sandars and Langlois (2005) found that a number of respondents thought that e-learning does not bring any benefit to them. Significant

drawback is related to the inconveniency in accessing information, the quality of information is changed, the requirements of time and lack of skills.

Interaction has been explained with many terms and categorisations, often in very contradictory ways. Different writers focus on different aspects of interaction or sometimes just use dissimilar terminology. Walther (1996) describes hyper personal interactions as interactions with feeling of intimacy, solidarity, and liking which cannot be achieved through face-to-face interactions however it can be faced throughout computer mediated communication facilitated interactions. It can be defined that social interaction merely as “intentional communication between two or more participants in the learning environment.”

In UniKL, interaction between students and lecturers might be limited if the students wants to interact in the classroom, but somehow with the LMS that has been provided by the UniKL, the students could always find a way if they wanted to interact with the lecturers, their peers or even to discuss through forum, download notes and so on through the LMS. Furthermore, LMS is one of the formal and official applications that used by the students and the lecturers. Other than LMS, such as Facebook and others, it cannot consider as formal learning tools because everything that is apply in the system will be recorded as a University’s right.

Researchers have agreed that learning is a social process (Harasim, 2002; Tu, 2000). Social presence and social interaction are aspects linked to the online learning. Researchers have identified social presence (Short, Williams, & Christie, 1976; Gunawardena & Zittle, 1997; So & Brush, 2008), social interaction (Gunawardena & Zittle, 1997; Picciano, 2002), collaborative learning (Kitchen & McDougall, 1998; Curtis & Lawson, 2001; So & Brush, 2008), and satisfaction (Gunawardena & Zittle, 1997; So & Brush, 2008) as important and essential elements for any successful and effective online course design (McFadden, 2006).

## **1.2 Problem Statement**

LMS has been extensively used and will continue to develop in many higher education institutions. Moreover, the system is not only limited to the online environment, but it is also take part in the web-enhanced teaching and learning environment. LMS is to enable interaction that is to enrich learning capability, skill and support higher-order learning, including problem solving, critical thinking, and collaboration skills (Smaldino, et al, 2005; Suwannatthachote and Monsakul, 2007).



In the new era, the teaching and learning development has been improved by the conjunction of a variety of technological, instructional, and pedagogical developments (Bonk & King 1998; Marina 2001). Technology is inspiring and challenging the limits of the educational structures that have commonly facilitated learning. Educators who support technology integration in the learning process believe it will enhance the learning process and effectively prepare to participate in workplace in the 21st century (Butzin, 2000; Hopson, Simms & Knezek, 2002; Reiser, 2001).

Many institutions of higher learning in Malaysia implement LMS to support their e-learning, for instance Open University Malaysia (OUM) has developed MyLMS since 2003 to support various e-learning activities. It is a comprehensive and flexible e-learning system allowing facilitators and learners to interact in a virtual environment. Universiti Utara Malaysia (UUM) implements LMS since the year 2000. The LMS known as LearningZone has various functionalities that support lecturers, students and administrators. UniKL also has a LMS that is known as VLE used to facilitate students to communicate with friends and lecturers as part of their learning process. Through e-learning, lecturers can setup an interactive course content, notes, create blog, forum, online quiz, assignment and etc.

Most of the previous studies regarding the LMS focused on the effects of the learning process, examining the level of LMS usage, features used within an LMS and attitudes towards using such systems. Hence, the previous study lack of in focuses and aim for the perspective of the humanitarian implications of communication like social interaction anxiety. The used of the technology such as e-learning, some reviewer of this technology would contend that "written" communication through a computer could not serve to improve one's communicative abilities, because it is not a real interaction. According to Beauvois (1997) rather, such "e-talk" may be considered to be "interactions in slow motion" which are real-time, in which the students have more time to think and compose than in oral interaction. Whereas in normal oral interactions, educators usually do not wait more than three seconds for a response to a question, pauses within electronic interaction are sustainable (Batson 1993). Each student may communicate at his or her individual pace, based upon his or her language ability and typing speed. According to Bruce, Peyton, and Batson (1993), the process could be described as "slow for control" but "fast for idea production. Although there are exists the possibility for slower pacing in these interactions, the drastic difference between written communication and oral conversation is the increased output or production by the students during the computer sessions (Batson 1993; KeIn 1992). Students may produce two to four times more sentences in chat sessions than in oral conversations (Kern 1995).

In oral classroom discussions, the instructors ask five times more questions than the students, but in electronic discussions, the students ask fifteen times more questions than the instructor (Kern 1995). It is assumed that the students feel more comfortable in online interaction rather than face to face interaction. According to this matter, it has to be observed that why the students like to use the online interaction rather than to interact face to face. Computer-mediated communication is a very cooperative activity in which

the students interact and respond to each other, acting as their own facilitators. In this case if they have the anxiety in interaction among the lecturers and peers, they might use this medium such as LMS. Everyone may "talk" at once, and everyone has the opportunity to "control" the conversation, since "turn taking" is not required, unlike in oral conversations (Beauvois 1997; Day and Batson 1995). In this situation, when the students is having more online interaction, the students can control the interactions. Either the students will continue or delay the interactions. The students can still think what to answer or ask during the interaction. Oral interaction and face to face interaction are totally different situation than an online interaction, where they can see facial expression and somehow it can be paused when suddenly the anxiety is occur and it could make the conversation become slow and cannot be control.

Interaction can be explained as "sustained, two-way communication among two or more person" (Garrison, 1993). The environment of these communications may comprise virtually any topic whether directly related to a goal or objective or not (Northrup, 2001). Additionally, although there could have been interaction amongst students and the lecturers beside of the LMS environment, such interaction is beyond the range of this study except for students' and the lectures' general views and judgements about such non-LMS interaction.

Numerous of studies describe that the greatest element for student judgments as to whether an online course is better or worse than a face-to-face course is the amount of interaction between student and lecturer and among students (Hiltz, 1995; Abrami & Bures, 1996). According to Hiltz (1995) reported that if the lecturer can assist meaningful, occupying cooperative group experiences online, students are probable to experience a greater sense of interaction than in a traditional face-to-face course.

Social interaction anxiety is a milder form of social phobia, which can have debilitating symptoms for people who are faced with social situations. Individuals are often motivated by a need to feel a sense of belonging (Baumeister & Leary, 1995); however, those with social interaction anxiety may find it difficult to achieve this social need because of their fear towards face-to-face interactions and may therefore turn to the Internet. According to Cem Cuhadar (2011), "a significant relationship was found between the level of a problematic Internet use and social interaction anxiety, and social interaction anxiety was found to be among the predictors of problematic Internet use.

Anxiety studies would come to encompass technology literacy and computer use. Macaulay (2003) presents the results of the study and proposed that even students who were technologically comfortable feel some anxiety at using the Internet for academic purposes. Nevertheless, the characteristics of anxiety studied relates more to the mechanical processes of computer interaction, rather than anxiety generated by social and affective interactions. The investigation into the students' social interaction anxiety with regard to the use of technology will continuously carry out as a learning platform. Furthermore, in this research most study on social interaction anxiety focuses on Internet

user, while students in University has been asked to use the LMS as part of their learning tools in the University. Hence it is important to see the effect of using the LMS towards the student social interaction anxiety, especially once they have to interact with other.

As realized from the online interaction, when the high use of the Internet, the possibility of social interaction anxiety on someone will occur when it comes face to face interaction. Furthermore, usually in the university it happens during the learning and teaching time in the classroom. When the students are encouraged to use the LMS to interact, it might be the face-to-face interaction are likely to encounter will decrease. As a result of this occurrence, when the students use LMS, it is likely a result of the use of online will give a cause for the occurrence of social interaction anxiety when the students having a face to face interaction with the lecturer.

Apart from this moreover Technology Acceptance Model (TAM) also been taken to be study in this research. Exposure to technology is important to assess a person's behavior. Since the theoretical point of this TAM, most studies use to see the behavior of a person, but as the effect of the use of LMS technology in the social interaction anxiety have not been discovered yet.

The TAM has been applied in many of studies engaging technology adoption in work-place settings and it is generally used in the information systems community. According to Lee et al. (2003), the TAM is the most extensively used theory in the information technology field. It has been theoretical to studies focusing on the acceptance of email, software programs, the Internet and other computer technologies, and been used with different research issues and a variety of control factors (Lee et al., 2003). So based on the explanation in TAM, it only can reveal to the acceptance of the technology.

According to Ibrahim Abood Almarashdeh, Noraidah Sahari, Nor Azan Mat Zin, Mutasem Alsmadi (2011), the empirical results of the study indicate that perceived usefulness and perceived ease of use have a significantly positive influence to user satisfaction. According to Sproull, Zubrow, and Kiesler (1986) claimed that some college students faced confusing and a loss of personal control when they confronted with the technology. Due to this situation, it is always happen to the first semester students lead to not been introduced and guide from the beginning on the use of LMS. By using the LMS in the university, the usage of the system needs to be investigated. Online educators are still in the development of describing terms and concepts that are commonly accepted by the education community, discovering their bases as teachers, and working to establish the best practices associated with technology use (Power & Gould-Morven, 2011). Based on the statement it shows that the lecturers also need to be active in using the online learning system and followed by the students. By looking at the acceptance of the technology, this researcher believes that the use of LMS in the University could be one of the predictor towards the social interaction anxiety, meaning that having the skills and knowledge to use the systems will affect the social interaction anxiety when the students in offline interaction.

The existence of online learning environment is to make the self-efficacy of student being valuable. Students with low Self-Efficacy regarding a task are more likely to avoid it, while those with high Self Efficacy are not only more likely to attempt the task, but they also will work harder and stay longer in the face of difficulties. Self-Efficacy has been explained to influence choice of whether to engage in a task, the effort expended in performing it, and persistence shown in accomplishing it (Bouffard-Bouchard, 1990). Kinzlen, Delcourt, and Powers (1994) defined that self-efficacy as an individual confidence in his or her ability, which may impact the performance of the tasks given. Self-Efficacy reflects an individual confidence in his or her ability to perform the behaviour required to produces the specific outcome and it's thought to directly impact the choice to engage in a task, as well as the effort that will be expended and the persistence that will be exhibited. According to Cassidy & Echus (2002), people who are not comfortable using computers normally have poor computer self-efficacy.

Many researchers realised that the people with a high level of computer self-efficacy have been discovered to be more willing to accept and use an information system (Hill et al., 1987; Venkatesh & Davis, 1996). A study conducted by Karsten and Roth (1998) found that computer training in an introductory information system course significantly increased students computer self-efficacy. As Compeau & Higgins (1995) found in their research that self-efficacy play a key role in determining individual feelings and behaviours. Hence, computer self-efficacy is a belief one's capability to use computer (Compeau & Higgins, 1995) and participants with less confidence in their ability to use computers might perform more poorly on computer based task. Picollo et al (2001) found that although the performance of two groups of students, those who were taught in the traditional classroom setting against to those who learned through a virtual learning environment, showed no significant differences, the latter group reported higher computer self-efficacy and a greater sense of satisfaction with their learning process. According to Erkan Tekinarslan (2011), it stated that the students online technologies self-efficacy level increase in parallel to their internet and computer experience in terms of PC ownership, internet usage opportunity, frequency and common Internet activities. According to Martin & Tutty (2008), LMS self-efficacy of the online learners did not have a significant effect on their course performance. This may possibly mean that there is a baseline capability with LMS use required for success, but once that level is perceived greater self-efficacy with the system is not required.

According to Wahlstedt and Honkaranta (2007), the LMS consisted pedagogical devices, human interactions, learning contents and assessment supporting and advancing traditional learning in school or in higher education. In Ramayah (2005) studies, many colleges are benefiting LMS for e-learning courses and instruction, however numerous lecturers limit themselves to utilize the LMS to upload course materials such as syllabus, reading materials and lecture slides to the course website and never use the discussion board to generate class discussion among students and themselves nevertheless lack of immediate feedback with the discussion board in LMS has discouraged users to utilise them. Developing a good LMS is not worthwhile if the, acceptance of the technology and the use of LMS were still minimum in the usage.

In reviewing the literature, it seems that although many studies have been done on self-efficacy in the use of technology, especially the LMS. However, needs to be researched to further understand self-efficacy with regard to the students' communication ability, the acceptance of the technology and their behaviour when use the LMS portal as part of their communication and learning tools. The achievement of any initiatives to implement instructional computer technology in an educational program especially in the social studies curriculum depends strongly upon the support and attitudes of teachers involved (Huang and Liaw, 2005; Kesten, 2006; Sahin and Thompson, 2006). According to some researchers (Northrup, 1990; Myers and Halpin, 2002; Alzamil, 2003; Bullock, 2004; 2006; Boon, 2007; Almuqayteeb, 2009), educators with positive attitudes with regard to computers are key to the successful integration of computers in schools since educators' attitudes may influence their effective use.

While social interaction shows to be significant for group maintenance and beneficial for students' online learning, many instructors use explicit or implicit strategies to encourage this style of communication in their online instruction. Considering to the amount of social communication, Huang and Wei (2000) found that only 40% of face-to-face group interaction time is spent on task-focused interaction, implying that more than half of a group's communication is off-task.

Erwin, Turk, Heimberg, Fresco, and Hantula (2004) state that "for socially anxious individuals, communicating with others on the internet in a text based manner (i.e., email, chat rooms, or instant messaging) may allow them to avoid aspects of social situations they fear for example blushing, stammering, other's reactions to perceived physical or social shortcomings while at the same time to partially meet their needs for interpersonal contact and relationship". In contrast, Kraut et al. (1998) discovered that online interaction greatly reduced face to face social interaction. Nie, Hillygus, and Erbring (2002) noted that "on average, the more time spent on internet, the less spent with friends, family and colleagues (in-person)". Hence, Offline social interaction and Interaction anxiety is also one of the important things to be research too. If in this research through positive aspect usage experiences it would seem that the effects of interaction anxiety can be controlled.

In this analysis, students' basic interaction, collaboration, and knowledge construction are defined in terms of the social processes that students use to communicate and work together in learning setting. Hence, a variety of possible factors could happen, both within the LMS and outside the LMS that may effects whether students' basic interactions are collaborative and whether student collaboration leads to knowledge construction. Identifying elements that influence the performance of students using an LMS is needed in order to develop and enhance students' ability to utilize the technology.

### **1.3 Research Questions**

1. What is the level of Extensiveness of Offline Social Interaction among UniKL students?
2. What is the level of (Perceived Ease of Use and Perceived Usefulness) in the LMS among UniKL students?
3. What is the level of LMS Self Efficacy (Asynchronous and Synchronous) among UniKL students?
4. Is the Extensiveness of Offline Social Interaction has a significant relationship with the Social Interaction Anxiety among UniKL students?
5. Is the (Perceived Ease of Use and Perceived Usefulness) in the LMS has a significant relationship with the Social Interaction Anxiety among UniKL students?
6. Is the LMS Self Efficacy (Asynchronous and Synchronous) has a significant relationship with the Social Interaction Anxiety among UniKL students?
7. Would the LMS Usage will be the moderation effects of the relationship between Extensiveness of Offline Social Interaction and Social Interaction Anxiety among UniKL students?
8. Would the LMS Usage will be the moderation effects of the relationship between (Perceived Ease of Use and Perceived usefulness) in the LMS and Social Interaction Anxiety among UniKL students?
9. Would the LMS Usage will be the moderation effects of the relationship between LMS Self Efficacy (Asynchronous and synchronous) and Social Interaction Anxiety among UniKL students?

### **1.4 Research Objectives**

1. To identify the level of Extensiveness of Offline Social Interaction among Unikl students.
2. To identify the level of (Perceived Ease of Use and Perceived Usefulness) in the LMS among UniKL students.
3. To identify the level of LMS Self Efficacy (Asynchronous and Synchronous) among UniKL students.
4. To identify the relationship between Extensive of Offline Social Interaction and Social Interaction Anxiety among UniKL students.

5. To identify the relationship between (Perceived Ease of Use and Perceived Usefulness) in the LMS and Social Interaction Anxiety among UniKL students.
6. To identify the relationship between LMS Self Efficacy (Asynchronous and synchronous) and Social Interaction Anxiety among UniKL students.
7. To determine the moderation effect on LMS Usage of the relationship between Extensiveness of offline Social Interaction and Social Interaction Anxiety.
8. To determine the moderation effect on the LMS usage of the relationship between (Perceived Ease of Use and Perceived Usefulness) in the LMS and Social Interaction Anxiety.
9. To determine the moderation effect on LMS Usage of the relationship between LMS Self Efficacy (Asynchronous and synchronous) and Social Interaction Anxiety.

### **1.5 Significance of Study**

The field of human communication are increasingly challenged when the development of communication technology is growing rapidly. Communication technology has given a space to build interpersonal relationships through computer mediated communication therefore this study will attempt to make a valuable contribution towards better understanding of human communications on technology and knowledge on relational development in LMS, particularly within the local context. Provides a more in-depth understanding of the nature and roles of LMS in University's student development.

This study will allow the analysis in connection with the use of the LMS and also the impact on the social interaction anxiety of the students in the organisation of higher education in Malaysia. LMS implementation proved to be a new situation for lecturers and students to face the learning and teaching environment. With the previous research, most has showed that higher education institutions have implemented a LMS to manage online learning and teaching. Most of the study looked into the usage level and the impact of the LMS towards the students' learning. Whereby lack of the study towards social interaction after the use of LMS.

This research has provided opportunities in extending the use of the theory in the new media such as LMS. This research also has prioritized the methods in conducting the research. It focussed on the quantitative method to study the present situation by using survey. The advantage of conducting this research by using survey was that the findings are reliable and valid to represent the current situation. Survey has provided the advantage of a large group of selected students to be measured in terms of their perceptions of the LMS, LMS Self-Efficacy and Social Interaction Anxiety.

Social interaction is very important in the student's daily life since the use of the LMS that has been implemented but the social interaction should be taken as will further help the students not to be nervous when interacting face to face with each other. This learning environment can acquire benefits from the integration of classroom and online delivery, students who to pursue further knowledge thereby increase their learning outcomes and interaction.

This study was conducted on the cause from various considerations. First, no previous research has sought to investigate UniKL's student social interaction anxiety towards the use of LMS and empirically validate the technology acceptance model. Moreover, the findings of this study will provide the university with more insight into academics' perception of LMS. Further, this study will pave the way for future research on technology acceptance within the higher education context in Malaysia. Specifically, this study adopted and modified a questionnaire to suit the LMS acceptance situation that may be reused in future research. Moreover, the methodology and hypothesis of this research can help to contribute to larger body of research knowledge particularly in the use of Learning Management System Technology.

#### **1.6 Limitation of Study**

1. This study will take place in University Kuala Lumpur, Malaysia. The finding of this research will only give a result on University Kuala Lumpur. It is only take place in University Kuala Lumpur because Ministry of Higher Education (2011) has been done with all institutions in Malaysia which 30 Malaysian HEIs, comprising of 20 public HEIs, 7 private HEIs and 3 polytechnics. In previous research the researchers only focused on the usage and the acceptance of LMS.
2. Lack of material references and information resources such as textbooks and journals related to the use of the LMS and social interaction anxiety in higher education institutions. This is because few studies involving educations institutions in Malaysia.
3. This study will use questionnaires to collect data and it has to be done in the middle of the semester regardless to gets some feedback on the use of LMS and to see the result depending on the answers received from the respondents. The questionnaire was prepared in English, in which the language was very simple with the usage of words appropriate to the respondent level of qualification.
4. This research is only focus on students who use computers as a source of learning and personal use. This is because, it is believed that students who are well use to interact online through internet and use the LMS as their part learning will also good in offline social interaction.



## **1.7 Keyword of the Study**

### **1.7.1 Social Interaction**

Social presence is stated to be a fundamental element to influence online interactions (Tu, 2002; Tu & McIssac, 2002). According to Jung, Choi, Lim, & Lee (2002), "Social interaction is defined as interaction between learners and instructors that occurs when instructors adopt strategies to promote interpersonal encouragement and social integration."

### **1.7.2 Extensiveness of Offline Social Interaction**

Previously before we had the Internet, the closest form of written communication we had were handwritten post notes to the lecturers and peers. The extensiveness of offline social interactions had more depth than what we are experiencing online today because we could at least hear the tone of voice through phone calls. Nowadays in higher education especially in the University, the students and lecturers has started using the LMS as part of their learning and interaction. Although interacting with others offline gives us an experience that no other mediums could, an online social life also offers something which offline life does not. In face-to-face meetings have often been shown to enhance interaction due to the multiple channels available for participants. In other words, it's easier to work together face-to-face because we have multiple channels and rapid feedback to build common ground.

### **1.7.3 Technology Acceptance Model**

The Technology Acceptance Model (TAM) has been widely used to predict user acceptance and it is use based on perceived usefulness and perceived ease of use. The technology acceptance model (TAM) created by Davis, Bagozzi and Warshaw (1989) focuses on the variables affecting users' satisfaction in technology use. TAM is used to theorise that the behavioural intention of an individual to use a system is determined by two main factors: perceived usefulness (PU) and perceived ease of use (PEU) (Davis, 1993).

#### **1.7.3.1 Perceived Usefulness**

Perceived Usefulness (PU) is the degree to which an individual believes that using a particular system would enhance his or her job performance (Al-Gahtani, 2001; Davis, 1993; Mathwick et al., 2001). In determining the adaption

of innovations, a study by Tan and Teo (2000) indicates that Perceived Usefulness is an important factor. In the context of E-learning, perceived usefulness is defined as the perception of how user sees improvement in learning effects through the adoption of an E-learning system (Sun et al., 2008).

### **1.7.3.2 Perceived Ease of Use**

Perceived Ease of Use (PEOU) refers to how clear and understandable interaction with the system is, ease of getting the system to do what is required, mental effort required to interact with the system, and ease of use of the system (Ndubisi et al., 2003). Perceived ease of use, in contrast, refers to "the degree to which a person believes that using a particular system would be free of effort." This follows from the definition of "ease": "freedom from difficulty or great effort." Rogers (1962) theorized that PEOU demonstrates the degree to which an invention is seen as being not too difficult to understand, learn or operate. PEOU in TAM has been defined as the extent to which a person believes that using a certain technology will be free of effort (Davis, 1989).

### **1.7.4 Self-Efficacy**

With the emergence of information technologies, many technological tools have been integrated into the process of learning, with corresponding effects on students' self-efficacy. Investigating the indirect influence of the integration of technological tools into learning is especially crucial in research related to Instructional Technology. As Hodges (2008) indicated, there is lack of research on motivation constructs in online learning environments. Concern for the affective domain is absent due to its difficulty in conceptualization and measurement, even though Dick, Carey, and Carey (2005) have identified motivation as an important factor that should be considered by instructors in course design. Hence, it is imperative to conduct more research on the relationship between self-efficacy and online learning.

### **1.7.5 Learning Management System Usage**

A Learning Management System is a web-based application that allows educational institution to provide the students and lecturers with informational content and educational resources. LMS allows communication, information sharing, assignment submission, on line quizzes and other learning activities between learners and lecturers (Al-hawari and Mouakket, 2010; Abdul Karim and Hashim, 2004). According to Wahlstedt and Honkaranta (2007), the learning management systems (LMS) consists pedagogical devices, human interactions, learning contents and assessment supporting

and advancing traditional learning in school or in higher education. LMS can be in the form of Moodle, Blackboard, and any other similar system that allows communication, sharing of information, submission of assignments, attempting quizzes and other related learning activities between learners and lecturers (Al-hawari and Mouakket, 2010; Abdul Karim and Hashim, 2004; Chanchary and Islam, 2011). LMS must satisfy the needs of the users: the students and the instructors. LMS offers great opportunity to improve the teaching and learning process.

#### **1.7.6 Social Interaction Anxiety**

Shyness and social interaction anxiety are often used interchangeably. It is an emotion characterised by uneasiness or fear in a social interaction that involves a concern of being judged negatively, evaluated, or looked down upon by the others. If a person usually becomes irrationally anxious in social situations, but seems better when they are alone, then "social interaction anxiety" may be the problem.

### **1.8 Conclusion**

This chapter describes the background of the development of communication technology in LMS. In the problem statement it focuses on social interaction anxiety and issues of acceptance and use of communication technologies as medium in education. In assessing Social Interaction Anxiety among the predictors that can be counted in are Extensive of Social Interaction, LMS Self Efficacy, Perceived Ease of Use and Perceived Usefulness. Based on the hypothesis in the literature review on the tentative model, it would be tested whether the LMS Usage as the moderator can be fit in this proposed model. With the outcome of the model it is expected to be a guide in Institute of Higher Education, whether the LMS is one of the communication technologies that can change the situation of the interaction between students and the educators. It is a need to further research on Social Interaction Anxiety and the gap in this research is the usage Learning Management System in University. A total of nine objectives in this study are to get the feedback about this matter.

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## LIST OF PUBLICATIONS

Azriaty Mazlan and Jusang Bolong, (2017). The Role of the Learning Management System Usage and Impact of the Changes to the Social Interaction Anxiety: A Tentative Model. *The Social Sciences*, 12: 325-330.

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