UNIVERSITI PUTRA MALAYSIA

USAGE AND ACCEPTANCE OF LEARNING MANAGEMENT SYSTEM AMONG STUDENTS AT A PUBLIC UNIVERSITY IN MALAYSIA

LEE HWEI LING

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LEE HWEI LING

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Chair: Nor Azura binti Adzharuddin, PhD

Faculty: Modern Languages and Communication

The Learning Management System (LMS) is established to help connect students and lecturers without the confines of the traditional classroom. It is a software environment which is designed to manage user's learning interventions as well as deliver learning content and resources to students. However, with every new implementation of a system, there would be both positive and negative feedbacks regarding the system. Research on acceptance of LMS in Universiti Putra Malaysia (UPM) is quite limited. Therefore, this research aims to study the usage and acceptance of Putra LMS among UPM students. The objective of this study is to identify students' usage pattern and acceptance of the Putra LMS and the relationship of these factors with perceived usefulness and perceived ease of use of the system. The sampling method used in this research is probability sampling, with the chosen method of stratified sampling as the characteristic of the population being studied is not homogenous. This quantitative research uses self-administered questionnaires that have involved 400 undergraduate and postgraduate students. The findings of the study indicated that the Putra LMS is effective in helping students complete their tasks, is an essential online tool, simple to use, and is accessible at all times. The results of the study is hoped to be able to become a useful guide for academicians, universities, and future researchers alike. The university, UPM, will benefit from the study as they get to know the acceptance of students and lecturers of the LMS system, and work to enhance its features. This research is also hoped to be able to be an additional source of information related to the study of LMS usage in Malaysian universities. This study has given a new insight into the usage and acceptance of LMS among students from various faculties in UPM's Serdang campus and it is proven that they have found the system to be easy to use as well as useful in their learning activities.

Abstrak thesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

PENERIMAAN DAN PENGGUNAAN 'LEARNING MANAGEMENT SYSTEM' DALAM KALANGAN PELAJAR DI SEBUAH UNIVERSITI AWAM DI MALAYSIA

Oleh

LEE HWEI LING

Julai 2015

Pengerusi: Nor Azura binti Adzharuddin, PhD

Fakulti: Bahasa Moden dan Komunikasi

Learning Management System (LMS) telah dibangunkan untuk membantu pelajar dan pensyarah berinteraksi melampaui kuliah secara tradisional. LMS adalah perisian yang direka untuk menguruskan pembelajaran di mana pengguna turut serta dalam proses pembelajaran, serta menyampaikan kandungan pembelajaran kepada pelajar. Akan tetapi, terdapat maklum balas positif serta negatif terhadap pelaksanaan sistem yang baru ini. Sebelum ini, penyelidikan mengenai penerimaan LMS di Universiti Putra Malaysia (UPM) adalah terhad. Oleh itu, kajian ini dilakukan untuk memahami penggunaan dan penerimaan Putra LMS di kalangan pelajar UPM. Objektif kajian ini adalah untuk mengenal pasti corak penggunaan dan juga penerimaan pelajar terhadap Putra LMS, serta hubungan faktor-faktor ini dan tanggapan penggunaan serta kemudahgunaan sistem ini. Pensampelan kebarangkalian kaedah pensampelan berstrata digunakan kerana ciri-ciri populasi yang dikaji adalah tidak homogen. Kajian ini dijalankan secara kuantitatif dengan menggunakan borang soal-selidik yang melibatkan 400 pelajar sarjana muda dan pascasiswazah. Hasil kajian penyelidikan ini mendapati bahawa Putra LMS adalah efektif dalam membantu pelajar menyelesaikan tugasan, juga merupakan satu alat dalam talian yang penting dalam proses pembelajaran, mudah digunakan, serta boleh diakses pada setiap masa. Hasil kajian ini diharapkan dapat menjadi panduan yang berguna untuk ahli akademik, universiti, dan para penyelidik yang akan mengkaji topik yang sama pada masa yang akan datang. UPM akan mendapat manfaat daripada kajian ini kerana pihak pengurusan boleh melihat dan memahami penerimaan pelajar dan pensyarah sistem terhadap Putra LMS, dan berusaha untuk meningkat taraf sistem tersebut. Kajian ini diharapkan dapat menjadi

sumber maklumat tambahan yang berkaitan dengan kajian penggunaan LMS di universiti-universiti di Malaysia. Kajian ini juga diharapkan dapat memberi wawasan baru ke dalam penggunaan dan penerimaan LMS dalam kalangan pelajar daripada pelbagai fakulti di kampus Serdang UPM. Menerusi kajian ini, telah terbukti bahawa para pelajar UPM bersetuju bahawa Putra LMS mudah untuk digunakan serta berguna dalam aktiviti pembelajaran mereka dan membantu komunikasi antara pelajar dan pensyarah.

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

Nor Azura binti Adzharuddin, PhD
Senior Lecturer,
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Chairman)

Megat Al-Imran bin Yasin, PhD
Senior Lecturer,
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Member)

_____
BUJANG BIN KIM HUAT, PhD
Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date:

Declaration by graduate student

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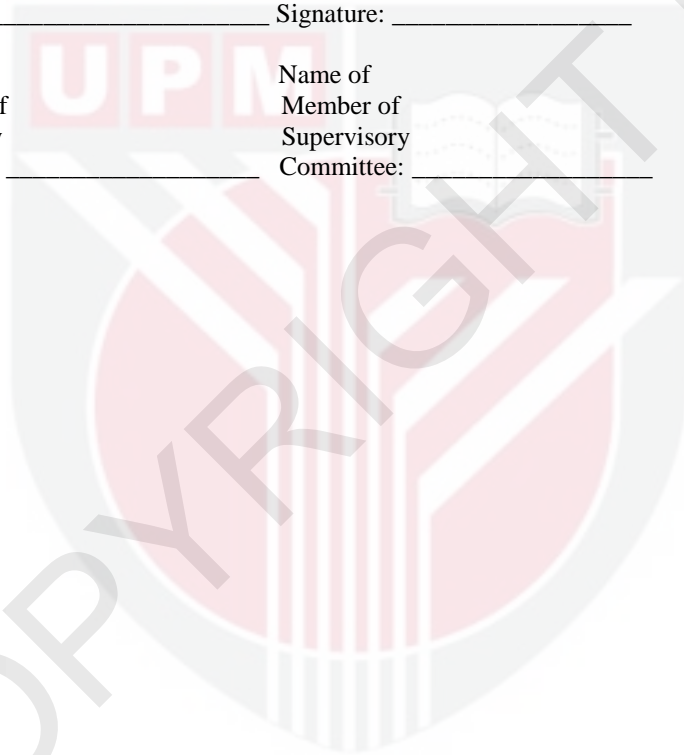
This is to confirm that:
- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature: _____ Signature: _____

Name of   Name of
Chairman of   Member of
Supervisory   Supervisory
Committee: _____   Committee: _____

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LIST OF ABBREVIATIONS

CMS	Course Management System
FPP	Faculty of Educational Studies
GAIS	Post Graduate Academic Affair
ICT	Information & Communication Technology
IIUM	International Islamic University Malaysia
IT	Information Technology
LCMS	Learning Content Management System
LDS	Learning Design System
LMS	Learning Management System
LSS	Learning Support System
PEU	Perceived Ease of Use
PU	Perceived Usefulness
SAIS	System of Students Affair
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
UMIS	University Management Information System
UPM	Universiti Putra Malaysia
UUM	Universiti Utara Malaysia

LIST OF APPENDICES

CHAPTER ONE

INTRODUCTION

This chapter discusses the foundations of a research which includes the introduction, background of the study, statement of the problem, research questions, research objectives, significance of the study, limitation of the study and operational definition.

1.1 Background of the study

University students are mostly self-sufficient in their learning as instructors usually only provide lecture notes, hence students are left to discover and search for more information and additional knowledge regarding a subject discussed in the classroom. The tertiary learning process is two-way; instructors share information and students give feedback in return regarding a topic discussed in the classroom. Therefore, university students need to regularly expand their knowledge by exploring for additional information.

In today's modern times, the Internet is easily available with the advancements of information technology and it is mostly accessible in urban areas, where most tertiary education institutions are located. The Internet is described as a vast computer network which functions to link smaller computer networks worldwide, and this includes commercial, educational, governmental, and other networks, all of which uses an identical set of communications protocols. Today's university students are privileged to have Internet access on campus, and there are usually Internet cafes located within a walking distance from the university's campus which also caters to their needs. In addition, most students subscribe to an Internet service provider, meaning that they have Internet access at home as well.

Seeing as most university students have access to the Internet in Universiti Putra Malaysia (UPM), an online student portal or Learning Management System (LMS) named the Putra LMS was established in 2009. The LMS is an online portal that connects lecturers and students, and it provides an avenue for classroom materials or activities to be shared easily. It is also a portal that enables lecturers and students to interact out of the classroom, having discussions through forums that could otherwise take up too much of the time supposed to be spent learning in the classroom.

The aims of this research paper are to report on the usage and acceptance of the Learning Management System (LMS) among Universiti Putra Malaysia students and the relationship of these factors with perceived usefulness and perceived ease of use of the system.

1.2 Statement of the problem

The Learning Management System is established to help students and instructors communicate when they are out of the conventional classroom. But with every new implementation of a system, there would be both positive and negative feedbacks regarding the system. While there are many studies done by scholars on this system, many are concentrated on the uses of the system in universities all over the globe.

Researches on LMS in Malaysian universities at the moment remain sparse, but most are focused on the uses of LMS among students. The current study aims to further explore the field of LMS use by researching on the acceptance level towards LMS among students. The study also aims to identify students' LMS usage patterns, as well as analyze their perceived usefulness and perceived ease of use towards the LMS.

In a previous study done by Mas Nida et al. (2008), it was revealed that students from Faculty of Educational Studies in UPM found that there were positive impacts of using the LMS in their learning environment. The study also found that students regularly used the LMS to download notes, check current marks, and connect with instructors and friends via instant messaging while on the portal, showing that they are positive towards the system and accept its implementation.

So far, research on acceptance of LMS in UPM is only from Faculty of Educational Studies and Institute of Mathematical Research, as published in Mas Nida et al. (2008). It is also noted that Mas Nida et al.'s (2008) research was based on the FPPLMS portal, created by and named after the Faculty of Educational Studies (*Fakulti Pengajian Pendidikan*, FPP) in UPM. Currently, the new LMS system used campus-wide in UPM is the Putra LMS. Therefore, the current study would provide a new insight to study the acceptance of Putra LMS among students from various faculties in UPM as it would benefit the institution and whole student population in future usage of the system.

1.3 Research questions

In light with the above discussion, a number of research questions are raised:

1. What are UPM students' usage patterns of Putra LMS?

2. What is the level of UPM students' acceptance of Putra LMS?

3. What is students' perceived usefulness towards Putra LMS?

4. What is students' perceived ease of use towards Putra LMS?

1.4 Research objectives

In light with the above discussion, a number of research objectives are outlined. They are split into one main general objective and four specific objectives

General objective:

To examine the usage and acceptance of the LMS among UPM students and the relationship of these factors with perceived usefulness and perceived ease of use of the system.

Specific objectives:

1. To identify UPM students' usage patterns of Putra LMS

2. To examine UPM students' acceptance level of Putra LMS

3. To discuss students' perceived usefulness of Putra LMS

4. To analyze students' perceived ease of use of Putra LMS

1.5 Significance of the study

1.5.1 Academic and pragmatic

A systematic research will produce results which are good, precise and useful. Therefore, the results of this research is hoped to be able to become a useful guide for academicians, universities, and future researchers alike. The university, UPM, will benefit from the study as they get to know the acceptance of students and lecturers of the LMS system, and work to enhance its features. This study will also benefit other learning institutions as they can assess whether the implementation of an online student portal as part of communication activities using technology will give benefits to their students in the long run.

On top of that, publishers will also benefit from the current study as they can study the acceptance of an online portal where materials and information are shared, exchanged and discussed upon. This research also contributes to the understanding of students' usage and acceptance of the implementation of LMS in universities. In addition, this research will be helpful in becoming another source of literature and information in the field of communication using technology.

1.5.2 Methodology

This study is important because it highlights the important factors of how students use and accept the LMS in undertaking their classroom activities. The variables used in this study can be used to find the relationship between students' acceptance of Putra LMS and the relationship of these factors with perceived usefulness and perceived ease of use of the system. Therefore, this study also explores a new area related to the usage and acceptance of LMS among university students.

1.5.3 Application

This research is hoped to be an additional source of information related to the study of LMS usage in Malaysian universities. In tertiary education institutions, LMS offers the potential to change and develop new methods in learning as well as provide flexibility for instructors and students to communicate out of the classroom. The use of the LMS portal has become a requirement for students and instructors at most tertiary education institutions. Most universities have developed their own LMS portal for the students' use, albeit with names other than LMS. It is also hoped that Malaysian universities in general would be able to improve and upgrade the LMS in their respective universities by taking into account the feedback of the students and lecturers who use the system in their classroom activities.

1.6 Limitation of the study

The study will only be conducted among students from various faculties in UPM's Serdang campus as they fit the requirements of this study. Out of the 15 faculties located in the Serdang campus, only students from 12 faculties were chosen as the number of respondents is capped at 400 for the purpose of distributing the research questionnaires. The first reason why UPM students were selected as the subjects for this research was because they are university students with the exposure towards a learning management system. The second reason was that UPM students have Internet

access on campus, whether through Wi-Fi connection or computer laboratory located in the library. Some students also access the Internet at home or at Internet cafes outside campus grounds. The third reason was because UPM students have access to the Putra LMS system, which is the main focus of this study. Therefore, UPM students are the right candidates to be chosen as the subjects for this research.

The Technology Acceptance Model (TAM) Theory (Davis, 1986) is used in this study to understand university students' behaviour towards adopting the LMS. In addition, the research will be conducted using the quantitative method, the research instrument used in this study were self-administered questionnaires and the data was analyzed using the SPSS software to code and obtain percentages and frequency distributions. The results of this research may not represent all university students in Malaysia since only UPM students are the subjects of this study. Nevertheless, we may be able to assess the current situation of LMS usage and acceptance among university students from a local perspective through the results of this research.

1.7 Operational definition

In this research there are a few keywords that have been identified. The keywords in this research are "usage", "usage pattern", "acceptance", "Learning Management System (LMS)", and "Putra LMS".

"**Usage**" is when you use something, or when something is being used (Cambridge University Press, 2005). In this research, "usage" refers to the use of LMS among UPM students.

"**Usage pattern**" is defined by the following constructs (Kokensparger, 2013); engagement (time on task percentage, average session duration), disengagement, and motivation. In this research, "usage pattern" refers to the pattern of Putra LMS use among UPM students.

"**Acceptance**" refers to general agreement that something is satisfactory or right (Cambridge University Press, 2005). In this research, "acceptance" refers to the agreement of students that Putra LMS is a satisfactory online student portal.

"**Learning Management System (LMS)**" is also known as Virtual Learning Environment or Course Management System, it is a set of tools and a framework that allows the relatively easy creation of online course content and the subsequent taking the course (Mas Nida et al., 2008). In this research, "Learning Management System" refers to Putra LMS, which is the current online student portal being used by UPM students. As there were various findings from previous studies regarding LMS, a more localised study is needed. Therefore Putra LMS is used as the main subject of the current study as it is a LMS set in a local environment.

"**Putra LMS**" was launched on 28 April 2009 by the then Deputy Higher Education Minister, Yang Berbahagia Dato' Saifuddin Abdullah. The Putra LMS was designed by the university's Centre for Academic Development and it was developed and deployed to fulfill four objectives. The first objective is to enhance the effectiveness of teaching and learning activities through the use of a common e-learning platform. The second objective is to create a single integrated database of learning contents which can be shared among UPM's educator and experts. The third objective is to facilitate systematic and effective system maintenance as well as an improved learning management system running on a common e-learning platform. The fourth objective is to fulfill the university's vision of producing quality graduates who are competitive, ethical and have the ability to progress and excel through lifelong learning (Putra LMS, 2013).

A further detailed discussion of the keywords above will be presented in Chapter 2 (page 7) and Chapter 3 (page 24).

1.8 Conclusion

With the identification of various areas such as the problem statement, research questions, research objectives, significance of the study, limitation of the study and operational definitions, this study aims to provide new insight into the usage and acceptance of LMS among UPM students in terms of how technology can improve the communication of information between students and instructors. The following chapter will discuss past literature which is related to the current study.

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