

**MOBILE LEARNING SERVICES ACCEPTANCE MODEL AMONG  
MALAYSIAN HIGHER EDUCATION STUDENTS**

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**MOBILE LEARNING SERVICES ACCEPTANCE MODEL AMONG  
MALAYSIAN HIGHER EDUCATION STUDENTS**

A Thesis submitted to the UUM College of Arts and Sciences in  
fulfilment of the requirements for the degree of Doctor of Philosophy  
Universiti Utara Malaysia

by  
**Naji Shukri Alzaza**



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## ABSTRAK

Pembelajaran mudah alih (m-pembelajaran) adalah dianggap sebagai bentuk e-pembelajaran yang menggunakan teknologi mudah alih untuk memudahkan pendidikan guru dan pelajar bagi sebarang tempat dan masa.. Penggunaan perkhidmatan m-pembelajaran dalam pendidikan tinggi di Malaysia dapat meningkatkan peluang dalam bidang pendidikan. Kesedaran pelajar terhadap penggunaan teknologi merupakan kunci kejayaan bagi sesuatu penerimaan. Penyelidikan ini bertujuan untuk mengkaji penerimaan dan penggunaan perkhidmatan m-pembelajaran di kalangan pelajar pendidikan tinggi Malaysia. Objektif utama adalah untuk mencadangkan model penerimaan pelajar bagi m-pembelajaran dalam persekitaran pendidikan tinggi. Bagi mencapai objektif tersebut, kajian ini menyelidik tahap penerimaan pelajar terhadap keinginan tingkah laku untuk menggunakan m-pembelajaran dan kesannya kepada tingkah laku penggunaan di peringkat pendidikan tinggi. Selain itu, kajian ini menyelidik tahap keperluan untuk menggunakan perkhidmatan m-pembelajaran di peringkat pendidikan tinggi. Ia menyediakan asas pengetahuan mengenai keadaan semasa kesedaran pelajar tentang perkhidmatan m-pembelajaran. Kajian ini mendapati bahawa persekitaran dan infrastruktur yang bersesuaian adalah faktor bagi menyebarkan dan menggunakan m-pembelajaran dalam persekitaran pendidikan tinggi. Tambahan pula, hasil kajian menunjukkan bahawa pelajar mempunyai pengetahuan yang mencukupi dan kesedaran untuk menggunakan teknologi tersebut dalam persekitaran pendidikan mereka. Walau bagaimanapun, halangan dan kekangan yang mungkin dihadapi semasa penggunaan sebenar pembelajaran mudah alih perlu dipertimbangkan. Keterbatasan m-pembelajaran bagi pendidikan juga mendapat perhatian dikalangan pelajar. Perspektif pelajar adalah sangat penting untuk tingkah laku penggunaan m-pembelajaran dalam persekitaran pendidikan tinggi. Dapatan kajian menunjukkan bahawa keinginan tingkah laku untuk menggunakan m-pembelajaran oleh para pelajar dalam persekitaran pendidikan tinggi mempunyai pengaruh positif ke atas tingkah laku pelajar. Oleh yang demikian, dengan adanya syarat tersebut akan lebih memudahkan pengaruh ke atas tingkah laku pelajar. Kajian ini mencadangkan beberapa faktor penentu yang penting terhadap keinginan tingkah laku untuk menggunakan m-pembelajaran dalam persekitaran pendidikan tinggi.

**Kata Kunci:** Perkhidmatan Pembelajaran Mudah alih, Model Penerimaan Pembelajaran Mudah alih dan Prototaip Pembelajaran Mudah alih.

## ABSTRACT

Mobile learning (m-learning) is considered as the next form of e-learning using mobile technologies to facilitate education for teachers and learners anywhere and anytime. Engaging the m-learning services in the Malaysian higher education could improve the availability of education. Students' awareness of such technology is a key for success acceptance. This research aims to study the acceptance and use of m-learning services among Malaysian higher education students. The main objective is to propose a students' acceptance model of m-learning in the higher education environment. The study investigates the students' acceptance of behavior intention to use m-learning and its effect on usage behavior in the higher education environment. It provides the knowledge base about the current state of students' awareness about m-learning services. The study found that both of the environment and the infrastructure are appropriate to diffuse and utilize m-learning in the higher education environment. Furthermore, the results showed that the students have adequate knowledge and awareness to use such technology in their education environment. The limitations of m-learning for education were well concerned by students. The students' perspective is very important to investigate the use behavior of m-learning in the higher education environment. Findings of the study suggest that the behavior intention to use the m-learning by students in the higher education environment have positive influence on the use behavior. Consequently, the availability of facilitating conditions is an important to influence students' use behavior. The study suggests several factors as important determinants of the behavior intention to use the m-learning in the higher education environment. Specifically, behavior intension to use appears to be adopted and facilitated by the usefulness of m-learning services, so more usefulness of m-learning leads to more acceptances among students in the higher education

**Keywords:** Mobile Learning Services, Mobile Learning Acceptance Model, Mobile Learning Prototype

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## **LIST OF ABBREVIATIONS**

<b>CMS</b>	Course Management Systems
<b>CSFs</b>	Critical Success Factors
<b>DSRM</b>	Design Science Research Methodology
<b>GPRS</b>	General Packet Radio Service
<b>ICT</b>	Information and Communications Technologies
<b>IDT</b>	Innovation Diffusion Theory
<b>LMS</b>	Learning Management Systems
<b>PDA</b>	Personal Digital Assistant
<b>PLE</b>	Personal Learning Environment
<b>PSSUQ</b>	Post Study Satisfaction User Questionnaire
<b>IS</b>	Information Systems
<b>TAM</b>	Technology Acceptance Model
<b>TPB</b>	Theory of Planned Behavior
<b>TRA</b>	Theory of Reasoned Action
<b>URL</b>	Uniform Resource Locator
<b>VIF</b>	Variance Inflation Factor
<b>W3C</b>	World Wide Web Consortium
<b>WAP</b>	Wireless Application Protocol
<b>Wi-Fi</b>	Wireless Fidelity
<b>WML</b>	Wireless Mobile Markup Language
<b>XML</b>	Extensible Markup Language
<b>SMIP</b>	Student's Mobile Information Prototype



# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Introduction**

This chapter provides an overview of the study background, problem statement, research questions, and objectives of the research. These are followed with discussion on the significance and contribution of the study. Scope of the study is identified and conceptual research framework is illustrated. Finally, this chapter ends with a discussion on the organization of remaining chapters.

### **1.2 Background of the study**

In the recent years, mobile learning (m-learning) has moved from being a theory, academic exploration and technology idea, into a real and valuable contribution to learning environment (Stead, 2005) and during the past decade every area of education has been affected by the introduction and use of technology. Moreover, m-learning has coincided with the evolution of the era of online world (Downes, 2005). The rapid evolution of mobile technology leads to development of m-learning using wireless on mobile devices (Yordanova, 2007). Furthermore, the learning process evolves in parallel with the communication means development; it has developed from conventional face-to-face to become distance learning as well as e-learning (Keegan, 2002).

M-learning is an emerging form of e-learning that offers the opportunity for both teachers and learners to interact with educational material and services using

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only

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