

# Acceptance Of Mobile Learning Among Students In Isra University

Farah Faris Al-Monthry MSc Software Engineering

Supervisor Prof : Mohammad Fayoumi Dr : Bassam Al-Shargabi

COLLEGE OF GRADUATE STUDIES ISRA UNIVERSITY



# Acceptance Of Mobile Learning Among Students In Isra University

By Farah Faris Al-Monthry MSc Software Engineering

A Thesis Submitted in Fulfilment of The Requirement for the Degree of Master of Software Engineering Faculty Information Technology, Isra University Amman - Jordan October 2017 The undersigned have examined the thesis " Acceptance of Mobile Learning Among Students in Isra University " presented by Farah Faris Al-Monthry , a candidate for the degree of Master of Science in Software Engineering and hereby certify that it is worthy of acceptance.

Data	Prof .Dr. Mohammad Al-Fayuomi
Data	Dr. Bassam Al-Shargabi
Data	Dr. Adi Maaitah

Data

Dr. Abdulsalam Alarabeyyat

### ABSTRACT

The recent development in the information and Communication industry is having a tremendous impact over the education industry. With the advent of technologies like e-learning and Mobile learning institutions have started to adopt to these technologies. This study considers the various models of technology acceptance which have been used by various researchers over a number of years. The study aims at developing a theoretical model based on the technology acceptance model (TAM) and identifies the various factors associated in the incorporation of Mobile learning among students at Isra university. This study is quantitative in nature and uses a survey method to gather data necessary to address the concerns of student's studying at Isra university. A total of six factors were identified in the literature review "performance expectancy, social influence, efforts expectancy, perceived playfulness , behavioral intention and facilitating conditions " which influence the adoption of mobile learning among students in universities. Based on the analysis of the data the study proposes a research model for the adoption of mobile learning.

### **KEYWORDS**:

M-learning, Factor, TAM, TPB, UTAUT, Model, SPSS, Analysis, Survey, performance expectancy, social influence, efforts expectancy, perceived playfulness, behavioral intention and facilitating conditions

### ACKNOWLEDGMENT

First and foremost, I would like to thank my God, Allah Almighty, for giving me endless graces. My deep sense of gratitude to the beacon of science, to the master of creature, to the greatest Prophet, Mohammed (Peace and Blessings of Allah Be Upon Him).

I take this opportunity to express my gratitude to thank my dear Mother; also, to who tired in order to the softest comfort and happiness, to whom taught me how elevated the ladder of life with wisdom and patience, to my dear Father. My thanks and appreciations also go to my sisters, for their encouragement, support and patience.

Finally, yet importantly, I would like to show my greatest appreciation to my supervisor Prof Dr: Mohammad Fayoumi & Dr: Bassam Al-Shargabi Words are inadequate and I can't say thank you enough for his tremendous support and help. I feel motivated and encouraged every time I attend his meeting. Without his encouragement and guidance this research would not have materialized.

## DECLARATION

I hereby declare that this thesis, submitted to University Isra as fulfillment of requirements for the degree of Master of Information Technology has not been submitted as an exercise for a similar degree at any other university. I also certify that the work described here is entirely my own except for excerpts and summaries whose sources are appropriately cited in the references.

This thesis may be made available within the university library and may be photocopied or loaned to other libraries for the purposes of consultation.

October 2017

Farah Faris Al-Monthry

## TABLE OF CONTENTS

ABSTRACT	
ACKNOWLEDGMENT	
DECLARATION	
TABLE OF CONTENTS	lv
LIST OF TABLES	Vii
LIST OF FIGURES	Viii
GLOSSARY OF TERMS	Ix
CHAPTER 1: INTRODUCTION	
1.1 Introduction	1
1.2 Problem Statement	3
1.3 Research Objective	4
1.4 Research Question	
1.5 Significance of the study	
1.6 Scope of this Thesis	
1.7 Research Approach	
1.8 Thesis Outline	
CHAPTER 2: LITERATURE REVIEW	
2.1 Introduction	8
2.2 Mobile Learning	8
2.2.1 Advantages of M-learning	10
2.2.1.1 Flexibility learning	10
2.2.1.2 Collaborative learning	10
2.2.1.3 Higher retention and improved accomplishment rates	10
2.2.1.4 Higher participation	10
2.2.1.5 Multi-device assistance	10
2.2.1.6 Performance assistance	11

2.2.1.7 Path to learning	11
2.3 Underpinning Theories	
2.3.1 Diffusion-Based Models	12
2.3.1.1 Rogers' Model	
2.3.1.2 Cooper And Zmud's Model	
2.3.1.3 TOE Framework- Model of Tornatzky and Fleischer	
2.3.1.4 Theory Of Planned Behavior (TPB) And Decomposed TPB (DTPB)	14
2.3.1.5 Technology acceptance model (TAM) and Extended TAM (TAM2)	16
2.3.1.6 Combined Tam And TPB (C-TAM-TPB)	16
2.3.1.7 Unified Theory Of Acceptance And Use Of Technology (TPB)	17
2.4 Challenges In Acceptance Of Mobile Learning	18
CHAPTER 3: RELATED STUDIES	
3.1 Introduction	20
3.2 Related Works	20
3.3 Mobile – Learning Acceptance	23
3.3.1 Facilitating Conditions	23
3.3.2 Perceived Playfulness	23
3.3.3 Social Influence	25
3.3.4 Performance Expectancy	
3.3.5 Efforts Expectancy	
3.4 Summary	29
CHAPTER 4: METHODOLOGY	
4.1 Introduction	30
4.2 Research Method	30
4.3 Research Questions	32
4.4 Proposed M-learning acceptance research model	32
4.5 Research Hypothesis	
4.6 Data Collection	
4.7 Research Instrument	35

4.8 Data Sampling	35
4.9 Data Analysis	36
4.10 Summary	36
CHAPTER 5: ANALYSIS AND FINDINGS	
5.1 Introduction 37	
5.2 Descriptive Analysis	
5.3 Reliability Analysis43	
5.3.1 Interpretation of Mean Scores	44
5.4 Correlations	46
5.5 Multiple Regressions	47
5.6 Coefficients	47
5.7 Summary	48
CHAPTER 6: DISCUSSION	
6.1 Introduction	50
6.2 Discussions	50
6.3 Model Validation	51
CHAPTER 7: CONCLUSION AND FUTURE WORK	
7.1 Introduction	52
7.2 Conclusion	52
7.3 Limitation of Study 5	
7.4 Future Work	
REFERENCES	55

# LIST OF TABLES

Table 2.1 TPB (Theory of planned behavior)	14
Table 2.2 Technology acceptance model (TAM) and Extended TAM (TAM2)	16
Table 2.3 Combined TAM and TPB	
Table 2.4 Unified theory of acceptance and use of technology (UTAUT)	
Table 3.1 Summarize factors that used to evaluate the acceptance of M-learning	28
Table 5.1 Frequency Table of Gender	37
Table 5.2 Frequency Table of Qualification	38
Table 5.3 Frequency Table of Age	39
Table 5.4 Frequency Table of Annual House Hold Income	40
Table 5.5 Frequency Table of Marital status	
Table 5.6 Frequency Table of Occupation	
Table 5.7 Reliability Statistics	
Table 5.8 Interpretation of Mean Scores (Ehram and Oxford, 1991)	44
Table 5.9 Interpretation of Mean Scores (Ehram and Oxford, 1991)	44
Table 5.10 Correlations	46
Table 5.11 Model Summary	47
Table 5.12 Coefficients(a)	48
Table 5.13 Summary of Findings	49
Table 6.1 Model Validation	51

## LIST OF FIGURES

Figure 1.1 Organization of the Thesis	7
Figure 2.1 Five stages model in innovation- decision process	12
Figure 2.2 Model of Cooper and Zmud	13
Figure 2.3 Model of Tonatzky and Fleischer	13
Figure 2.4 Theory of Planned Behavior(TPB)	15
Figure 2.5 Theory of Planned Behavior and Decomposed (TPB )& (DTPB)	15
Figure 2.6 C-TAM-TPB	17
Figure 4.1 The flow chart of research study	31
Figure 4.2 Research Model	32
Figure 5.1 Frequency of Gender	38
Figure 5.2 Frequency of Qualification	39
Figure 5.3 Frequency of Age	40
Figure 5.4 Frequency of annual income	41
Figure 5.5 Frequency of Marital status	42
Figure 5.6 Frequency of occupation	43

## **GLOSSARY OF TERMS**

M-learning	Mobile –learning
ТАМ	Technology Acceptance Model
ТРВ	Theory of Planned Behavior
DTPB	Decomposed Theory of Planned Behavior
TRA	Theory of Reasoned Action
С-ТАМ-ТРВ	Combined TAM and TPB
UTAUT	Unified Theory Of Acceptance And Use Of Technology
IDT	Innovation Diffusion Theory
MPCU	Model of Personal Computer Utilization
SCT	Social Cognitive Theory
SPSS	Statistical Package for the Social Sciences
CA	Cronbach Alpha