TECHNICAL UNIVERSITY STUDENTS' ACCEPTANCE
OF COLLABORATIVE USING I-LEARNING

NUR SYAFIQAH AUNI BINTI KAMARUZAMAN

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

'I hereby declared that I had read through this thesis and in my opinion that this thesis is adequate in terms of scope and quality which fulfill the requirements for the award of Bachelor of Technology Management (Technology Innovation)'

SIGNATURE   : …………………………………………………

NAME OF SUPERVISOR   : PUAN MISLINA BINTI ATAN @ MOHD SALLEH

DATE   : …………………………………………………

SIGNATURE   : …………………………………………………….

NAME OF PANEL   : DR. FAM SOO FEN

DATE   : …………………………………………………….

TECHNICAL UNIVERSITY STUDENTS ACCEPTANCE
OF COLLABORATIVE USING I-LEARNING

NUR SYAFIQAH AUNI BINTI KAMARUZAMAN

The thesis is submitted in partial fulfillment of the requirements for the award of
Bachelor of Technology Management (Technology Innovation) with Honours

Faculty of Technology Management and Technopreneurship
Universiti Teknikal Malaysia Melaka

JUNE 2018

DECLARATION OF ORIGINAL WORK

"I declared that this project is the result of my own research except as cited in the references. This research project has not been any degree and is not concurrently submitted in candidature of any other degree."

Signature :

Name   :   NUR SYAFIQAH AUNI BINTI KAMARUZAMAN

Date   :

DEDICATION

This thesis is dedicated To my parents, Encik Kamaruzaman Bin Mat Ali and Puan Rozana Binti Osman whom has always been there supporting me through my ups and downs and giving me the extra boost that I always needed to finish up my thesis. My sister and brothers that has been giving me the moral support that I need. Next, Puan Mislina Binti Atan @ Mohd Salleh and Dr Fam Soo Fen, as my supervisor and panel that has been guiding me and giving me the motivation to finish my thesis. Thank you for the guidance and motivation for helping going through this research. Lastly, to my friends that has been behind me supporting me all the time.

ACKNOWLEDGEMENT

First of all, I would like to express my gratitude to my supervisor Puan Mislina Atan @ Mohd Salleh for supervising and guiding me to complete this "Projek Sarjana Muda".Thank you so much for all the guidance and knowledge that you have impart to me. Next, a sincere appreciation and thanks to Dr. Fam Soo Fen as my panel during the presentation by giving on her input and knowledge for me to make my thesis better.

Lastly, I would to express my deepest thanks and appreciation to my family members, which keeps on motivating me all the time. To all my friends, thank you for your understanding and advices that help me to complete this research paper thesis.

Thank you very much.

ABSTRACT

Continuous Developments of technology in education are continuous and nowadays followed by diversity of methods and application which can be used for the purpose of education in teaching and learning. The process of teaching and learning past few years ago starting with computer assisted only and now it is changed and growing because of the existance of internet. The learning which is by using paper and books now changed and being replace with the usage of electronic devices such as i-Learning. The objectives of this research are to investigate the determinants of technical university students acceptance of collaborative using i-Learning and to identify the relationship between the determinants and behavioral intention of collaborative using i-Learning among UTeM students. Not only that, the framework of this research is adopted by Unified Theory of Acceptance and Use of Technology (UTAUT) to identify the user acceptance on collaborative using i-Learning based on few construct that are performance expectancy, effort expectancy, social influence and facilitating conditions. The researcher use quantitative method by conducting a survey through questionnaire to a sample of 300 respondents among UTeM students in Melaka. From this research, the data collected were analyzed by using descriptive analysis. Research result shows that three variables (performance expectancy, social influence and facilitating condition) have a significant relationship with dependent variable (behavioral intention).

ABSTRAK

Perkembangan Teknologi dalam pendidikan sentiasa berterusan dan pada masa kini diikuti pula dengan kepelbagaian kaedah dan aplikasi yang boleh digunakan untuk tujuan pendidikan dalam pengajaran dan pembelajaran. Proses pembelajaran pada mulanya dibantu oleh komputer sahaja dan kini ianya telah berubah dan semakin berkembang kerana kewujudan internet. Pembelajaran yang menggunakan kertas dan buku tidak lagi di gunakan, semuanya telah digantikan dengan penggunaan peranti elektronik seperti I-learning. Objektif penyelidikan ini adalah untuk menyiasat faktor penerimaan pelajar universiti teknikal bersama sama menggunakan i-Learning dan untuk mengenal pasti hubungan antara faktor dan niat tingkah laku di kalangan pelajar UTeM bersama-sama menggunakan i-Learning. Bukan itu sahaja, rangka kerja penyelidikan ini diguna pakai oleh Teori Unified Penerimaan dan Penggunaan Teknologi (UTAUT) untuk mengenal pasti penerimaan pengguna secara kolaboratif menggunakan i-Learning berdasarkan beberapa pembinaan yang merupakan jangkaan prestasi, jangkaan usaha, pengaruh sosial dan memudahkan keadaan. Penyelidik menggunakan kaedah kuantitatif dengan melakukan tinjauan melalui soal selidik kepada sampel 300 responden di kalangan pelajar UTeM di Melaka. Dari kajian ini, data yang dikumpul dianalisis dengan menggunakan analisis deskriptif. Hasil kajian menunjukkan bahawa tiga pembolehubah bebas (jangkaan prestasi, pengaruh sosial dan keadaan memudahkan) mempunyai hubungan yang signifikan dengan pembolehubah bersandar (niat tingkah laku).

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF SYMBOLS

SYMBOL		MEANING
t	=	t value
p	=	significant
β	=	Beta
α	=	Cronbach's alpha
N	=	number
x	=	Independent Variable
y	=	Dependent Variable

LIST OF ABRREVIATIONS

NAME	ABRREVIATION
Universiti Teknikal Malaysia Melaka	UTeM
Research and Development	R&D
Unified Theory of Acceptance and Use of Technology	UTAUT
Statistical Package for the Social Sciences	SPSS
Multiple Regression Analysis	MRA
Pearson's Product Moment Correlation Coefficient	PMCC

LIST OF APPENDICES

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This chapter will be discussing about the introduction of the research. This part is important in order to describe and explain in details about the research. There are some important contents in this chapter that must be included that is the background of study, problem statement, research question, research objective, scope, limitation and key assumption of the study.

1.2 BACKGROUND OF STUDY

The movement of technological changes has brought an effective movement in educational and learning style. The value of knowledge also changes as the way of teaching and education style which is different from time to time. According to Gilbert (2007), there is a shift in the way that knowledge is utilized, the way it is created and the ownership of knowledge. The valued knowledge has changed, and this challenges the very foundations of the education system.

The advancement in technology affecting the area of education and learning. The technology is moving toward highest level, the educational area also should move forward so that the next generation not being left behind. Education should always be about preparation for the future but the future is uncertain and unknowable. It has always been this way. Presently, the key characteristic is the intensity of change and the super complexity of the world that humans navigate (Barnett, 2012).

If education and learning is a preparation for the future, every institution of education should serve the best for the student so they are well prepared to face the future. There are some of the learning techniques that already being implemented in the educational system that are active learning, collaborative learning, interdisciplinary learning and individualized learning.

According to Gerlach (1994), collaborative learning is based on the idea that learning is a naturally social act in which the participants talk among themselves. It is an educational approach to teaching and learning that involves groups of students working together to solve a problem, discuss concept, or complete a task. It is a situation where more than one student working together, and they are helping each other to understand any knowledge that they get by interaction among themselves.

It is a good learning technique which the students will share any information and experiences through communication either face to face conversation or computer discussions. Collaborative learning is effectively and efficiently since the students able to learn by working with their friend and they will get more understanding from the group discussion. According to Khalife (2013), collaborative learning create

opportunities for students to develop effective teamwork and communication skills, assimilate multiple views, deepen knowledge and promote critical thinking, develop independent learning strategies and benefit from out of class learning.

Technology has become an important factor in collaborative learning. The development of internet already created a place or space for people to communicate. The internet already allowing people to keep in communication even though in long distances. In order to produce skilled manpower, flexible and easy to be trained, trainees or students must be able to adapt to technological change (Bin, A. et al. 2014). This shows that technology can help in increasing the potential of collaborative learning. The aim of this research is to study technical students acceptance of collaborative using technology.

1.3 PROBLEM STATEMENT

There are many techniques for learning already being implemented by the institution of education in order to make student more interest in learning and studying. As for technical and vocational education and training (TVET) students, their learning are more to general education, the study of technologies and related sciences as well as the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economics and social life (Study Malaysia, 2016).

To ensure that the students are receiving education with a clear view towards the specific range of jobs, they are recommended to apply collaborative learning. Collaborative learning is an active process that involves all of the students to work together in learning and solving problem. Cooperative learning is a method touted by many as an effective instructional alternative to improve academic performance to competitive learning or individualistic learning (Johnson & Johnson, 1980)

There is a great deal of research on collaborative learning, but one research institution that stands out among the rest is the University of Minnesota's College of Education and Human Development headed up by professors and brothers Roger and David W. Johnson. They have dedicated the last twenty years and over 80 research studies to the investigation of collaboration in the classroom. Their research concludes that collaboration in the classroom resoundingly improves student learning, but with a catch. The collaboration must be implemented correctly. This goes back to the idea that the teacher has a pivotal role in group work even if they are not directly lecturing (University of Minnesota's College of Education and Human Development, 2013).

The usage of electronic devices during learning such as mobile phones and Apple devices can increase the student's performance in learning and education. The perception of students towards collaborative using i-Learning is being focused. According to Lyalina, Langmann & Krisilov (2011) i-Learning includes not only all types of E-Learning but also mobile, blended, remote learning and so on, where Internet technologies are used. It is a model of learning that organizes the educational process with the use of technology. Other than that, the usage of smart laboratory also can be describes as i-Learning because it involve the use of internet technologies . Smart laboratories are special mobile labs that possess features such as capability, elaboration, cuteness and cleverness (Lyalina, Langman & Krisilov, 2011). The purpose of smart lab use is to reach more educational skills and target in less time. Furthermore, smart lab can be a useful complementary educational resource for hands-on-lab as they allow remote monitoring or supervision of an on-going experiment.

Student engagement is critical to student motivation during the learning process. If the students are motivated to learn, the more likely they will be success in their study life. Technology can be utilized to create a motivating classroom environment where students are engaged in learning. An environment where technology is used in innovative ways leads to improved learning and teaching (Wishart & Blease, 1999).

1.4 RESEARCH QUESTION

1. What are the determinant of technical university students acceptance of collaborative using i-Learning?
2. What are the relationship between the determinants and behavioral intention of collaborative using i-Learning?
3. What is the significant model of technical university student acceptance of collaborative using i-Learning?

1.5 RESEARCH OBJECTIVES

According to Wiid and Diggines (2010), the research problem indicates the type of phenomenon (individual, group, organization, social interaction or social objects) and the aspects, characteristics or dimensions of the phenomenon that has to be researched. Research questions are the statement of the research problem. The research objectives are:

1. To investigate the determinants of technical university students acceptance of collaborative using i-Learning.
2. To identify the relationship between the determinants and behavioral intention of collaborative using i-Learning.
3. To highlight a significant model of technical university students acceptance of collaborative using i-Learning.

1.6 SCOPE OF THE STUDY

The scope of this study is to analyze the acceptance of technical university students at Universiti Teknikal Malaysia Melaka about collaborative learning using i-Learning. Instead of learning using the traditional style which is using books and paper, the learning style has been upgraded into learning using electronic devices.