

**UNIVERSITI TEKNOLOGI MARA**

**USABILITY STUDY ON e-PEMBELAJARAN  
SEPANJANG HAYAT (e-PSH) AT  
KOLEJ KOMUNITI MASJID TANAH**

**SITI KHAIRUNNISA BINTI BAHARUDIN**

Report submitted in partial fulfillment of the requirements  
for the degree of

**Master of Science (Information Technology)**

**Faculty of Computer and Mathematical Sciences**

**January 2014**

## ABSTRACT

Lifelong learning is the implementation of activities to improve knowledge, skills and competencies of communities. In community college, short course is provided to support lifelong learning education. Recent statistic shows that a total of 253,016 community members had attended short courses offered by community colleges across Malaysia. Due to the response from local community, Kolej Komuniti across the country, being the organizers, need a new mechanism to facilitate the registration of participants. Therefore, e-Pembelajaran Sepanjang Hayat (e-PSH) is developed as an online application system for the short courses and is implemented at all Kolej Komuniti in Malaysia including Kolej Komuniti Masjid Tanah (KKMT). However these systems are never being measured its usability in most areas. An initial survey among the e-PSH user community, reveals that they are not very keen to use the system on a basis of user-friendliness. The system also had limited contents, that critical information such as a courses catalogue for user to choose is not readily available. Hence, this research is attempts to study the usability problem of e-PSH. Online application system for short courses at Kolej Komuniti Masjid Tanah is known as e-PSH. This study also aim to investigate the usability problems which are actual problem of the system implementation. Understanding the usability problems is vital to identify areas for system improvement as the administrator needed to improvise in order to increase the level of user satisfaction and provide the e-PSH system more effective. User testing with five participant had been conducted to evaluate the usability problems of the system. In order to get feedback from user, interview session had been done after user finished all the task. The result is significant for e-PSH system future improvement in term of usability while using the online application for short course at Kolej Komuniti Masjid Tanah.

## ACKNOWLEDGEMENT

Alhamdulillah, Praise to Allah, The Most Gracious, Most Merciful.

I would like to thank Allah SWT, because with His mercy I am able to complete my project paper to fulfil requirements of the IT Project (SYS 798) course. This project could not have been written without the assistance and guidance of Pn. Jamaliah Binti Taslim who not only served as my supervisor but also encouraged and challenged me throughout the academic program. Of course to other lecturers that teaches me throughout my Master study here.

My greatest appreciation to my course-mate that always give me support in any ways and means, Siti Ubaidah, Azril, Azila, Zura, Ninie, Era, Dee, Wilda, Wiwi and many mores. A special thanks goes to my family and lovely housemate, Nor Akma for their continuous support day and night, understanding and patience along the way of my time study.

I would like to express my highest gratitude to Mr. Saiyidi Mat Roni for the guidance, comment and advice so that this report can be furnished.

I also would like to thank all participants who took part in this study. Without the generous help of many people, it would have been very difficult for me to complete this project. I thank them all. Last but not least, not forgetting other individuals whom names are not mentioned here for their contributions in whatever forms whether directly or indirectly. Thank you so much and may Allah bless all of you.

Siti Khairunnisa Binti Baharudin

January 22, 2014

Faculty of Computer Science and Mathematics

Universiti Teknologi MARA

## TABLE OF CONTENTS

	Page
<b>STUDENT’S DECLARATION</b> .....	i
<b>ABSTRACT</b> .....	ii
<b>ACKNOWLEDGEMENT</b> .....	iii
<b>TABLE OF CONTENTS</b> .....	iv
<b>LIST OF FIGURES</b> .....	vii
<b>LIST OF TABLES</b> .....	viii
<b>CHAPTER 1 : INTRODUCTION</b> .....	1
1.1 Background of Study .....	1
1.2 Problem Statement.....	2
1.3 Questions of The Study .....	4
1.4 Objectives.....	4
1.5 Scope.....	5
1.6 Significance of Study .....	5
<b>CHAPTER TWO : LITERATURE REVIEW</b> .....	7
2.1 Kolej Komuniti.....	7
2.2 History of Kolej Komuniti.....	7
2.3 Kolej Komuniti Masjid Tanah.....	8
2.4 Jabatan Kemahiran & Kejuruteraan .....	9
2.5 Jabatan Pembelajaran Sepanjang Hayat.....	10
2.6 Short Course .....	11
2.7 Online Application System.....	13
2.8 What is usability?.....	13
2.9 Usability Evaluation .....	14
2.10 Usability Evaluation Method .....	14
2.11 Usability Testing.....	17

2.12 Usability Testing Techniques.....	18
2.13 Human Computer Interaction.....	19
2.14 Conclusion .....	19

**CHAPTER THREE : METHODOLOGY..... 20**

3.1 Methodology and Approach of Study .....	20
3.2 Preliminary Study Phase .....	22
3.3 Usability Testing Planning Phase .....	22
3.3.1 Identify testing objectives.....	23
3.3.2 Identify testing approach .....	23
3.3.3 Prepare the instruments/materials.....	24
3.3.4 Identify the Participants and Location.....	26
3.3.5 Identify Recording Tools.....	26
3.3.6 Set up appointment with participants .....	26
3.3.7 Ethical consideration .....	26
3.4 Usability Testing and Data Collection Phase.....	27
3.4.1 During Test .....	27
3.4.2 After Test.....	34
3.5 Data Analysis Phase .....	35
3.6 Documentation Phase .....	35
3.7 Summary .....	36

**CHAPTER FOUR : ANALYSIS AND FINDINGS..... 37**

4.1 Objective 1 : Investigating The Usability Problems of e-PSH .....	37
4.1.1 Participant Profile Data.....	37
4.1.2 Status of Accomplish Task by Participants.....	38
4.1.3 Navigation Log File Analysis and Result.....	39
4.1.4 Time To Complete each Task.....	41
4.2 Objective 2 : Providing Suggestions for Design Improvement .....	46
4.2.1 Feedback Analysis.....	46