

UNIVERSITI TEKNOLOGI MARA

USABILITY TESTING OF E-LEARNING SYSTEM: A  
CASE STUDY ON KNOWLEDGE & LEARNING  
MANAGEMENT SYSTEM (EKLAS) AT  
MANAGEMENT SCIENCE UNIVERSITY, SHAH  
ALAM

**ROSIDAH BINTI ROSDI**

IT Project submitted in partial fulfillment  
Of the requirements for the degree of  
**Master of Science in Information Technology**

**Faculty of Computer and Mathematical Sciences**

July 2016

## ABSTRACT

Management Science University (MSU) is a private higher education institution that provide education at tertiary level in various field such as pharmacy, computer forensic, engineering, business, culinary arts, business, hospitality, business computing, information technology and medical. . Like any other higher education institutions, MSU have an e-learning system namely Knowledge & Learning Management System (EKLAS) that is designed to enable, teaching and learning through the use of internet technologies. The existence of a good e-learning system will give significant strategic advantages to an educational institution. The interface of e-learning system should be easy to use where student will be able to retrieve the content and not only focus on the interaction with the system. Therefore, usability plays an important role in the success of every e-learning system. However, based on preliminary study conducted with some students, they found out that it is difficult for them to acquire relevant information to their studies. Furthermore, usability testing has not been conducted since the EKLAS is developed. Therefore, this project aims to identify the usability problems of EKLAS and provide recommendations to improve the usability of EKLAS. This project specifically focuses on Management Science University, Shah Alam. Usability testing was conducted on five (5) participants where they had been interviewed and performed series of tasks to identify the usability problem of EKLAS. The results show that interface design of EKLAS is dull and unattractive. Certain materials is not accessible and important information not been included in the EKLAS system. The outcome of this project would assist the Information Technology & Innovation Centre Centre (ITIC) to identify usability problems that exist and provide a recommendation for them to improve the EKLAS. For future project, the usability testing could be extended to other branch campuses as well. Through conducting the usability testing in MSU campuses, comparative studies could be made possible. The studies could involve students from different faculties or focus on EKLAS usage among lecturers to see the usability of EKLAS from different perspectives.

**Keywords:** Usability testing, e-learning, EKLAS

## ACKNOWLEDGEMENT

*Praise be to Allah SWT Most Gracious, Most Beneficent, Most Merciful*

First and foremost, the deepest gratitude of all shall be bestowed to Allah the Almighty and The Merciful for all the insight which He gave to us that lead to the completion of this project. Without His blessings and consent, I might not have enough courage and determination to complete this project. All my thanks and appreciation will be laid upon Him.

My deepest gratitude is extended to Puan Jamaliah binti Taslim, for all assistance, advice, guidance, encouragement, new ideas and invaluable support given as my project supervisor for a better quality in my project. Thank you for being such a great mentor.

Not forgetting very special thanks to the students of Management Science & University, lecturers, and friends also colleagues of Master Science (Information Technology) for their support and encouragement during the process of completing this project.

Finally, this thesis is dedicated to the loving mother, for the encouragement and the faith in me. I would like to thank my beloved husband, for his continues support, and families for all support and courage towards my success. Without their personal sacrifices and being a constant source for encouragement, especially in the final stages, this thesis would not have been possible.

Thank You.

# TABLE OF CONTENTS

<b>AUTHOR'S DECLARATION</b>	<b>]</b>
<b>ABSTRACT</b>	<b>ii</b>
<b>ACKNOWLEDGEMENT</b>	<b>iii</b>
<b>TABLE OF CONTENTS</b>	<b>iv</b>
<b>LIST OF TABLES</b>	<b>viii</b>
<b>LIST OF FIGURES</b>	<b>ix</b>
<b>CHAPTER ONE</b>	<b>1</b>
1.1 Introduction	1
1.2 Project Background	1
1.3 Problem Statement	3
1.4 Research Questions	4
1.5 Objectives	4
1.6 Scope	4
1.7 Significance	5
1.8 Report organisation	6
<b>CHAPTER TWO</b>	<b>7</b>
2.1 Introduction	7
2.2 Definition e-Learning	7
2.2.1 Concept of e-Learning	8
2.2.2 Implementation of e-Learning in Malaysia	8
2.3 Knowledge Management Learning System	9
2.3.1 Modules	11

2.3.2	Issues and Challenges	14
	Similar e-Learning System	15
2.4.1	Olympia College	15
2.4.2	Sultan Idris Education University (UIPS)	16
2.4.3	National University of Malaysia	17
2.4.4	Politeknik Sultan Haji Alimad Shah, Kuantan (POLISAS)	18
2.4.5	Open University Malaysia (OUM)	19
2.4.6	International Islamic University Malaysia	20
	Usability	21
2.5.1	Categories of Usability	22
2.5.2	Usability Model	23
	Usability Evaluation	25
2.6.1	Usability Evaluation Method	26
	2.6.1.1 <i>Heuristic Evaluation</i>	26
	2.6.1.2 <i>Cognitive Walkthrough</i>	27
	2.6.1.3 <i>Focus Group</i>	27
	2.6.1.4 <i>Interviews</i>	28
	2.6.1.5 <i>Think Aloud</i>	28
	2.6.1.6 <i>Task-scenario</i>	29
	2.6.1.7 <i>Usability Testing</i>	29
<b>7</b>	Usability Theme	34
<b>7</b>	Conclusion	35