

TESIS^ APPROVAL STATUS FORM

JUDUL: INTERACTIVE MULTIMEDIA LEARNING = PHOTOSHOP FOR BEGINNER

SESI PENGAJIAN: 2004 / 2005

Saya ZAINAL ANAK LAMBI
(HURUF BESAR)

mengaku membenarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis adalah hakmilik Kolej Universiti Teknikal Kebangsaan Malaysia.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. ** Sila tandakan (/)

 SULIT (Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)

 TERHAD (Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)

 / TIDAK TERHAD


(TANDATANGAN PENULIS)

Kampung Sungai Buluh, Sadong Jaya,
94600 Asajaya,
Sarawak


(TANDATANGAN PENYELIA)

FAAIZAH SHAHBOOIN
Nama Penyelia

Tarikh: 14 / 10 / 04

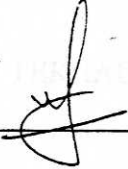
Tarikh: 14 / 10 / 04

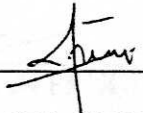
CATATAN: ** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.

^Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

ADMISSION

I admitted that this project title name of
INTERACTIVE MULTIMEDIA LEARNING: PHOTOSHOP FOR BEGINNER
is written by me and is my own effort and that no part has been plagiarized without
citations.

STUDENT:  _____ Date: 14/10/2004
(ZAINAL ANAK LAMBI)

SUPERVISOR:  _____ Date: 14 oct 2004
(PUAN FAAZAH BINTI SHAHBODIN)

DEDICATION

To my beloved parents and my friends.

ACKNOWLEDGEMENT

“Projek Sarjana Muda” give chance for student use and applicant their knowledge for develop the project independent. It is compulsory for a Kolej Universiti Teknikal Kebangsaan Malaysia to pass the “Projek Sarjana Muda” before being award the degree. This appreciation is give to Puan Faaizah binti Shahbodin as Supervisor for “Projek Sarjana Muda”. Without her guidance, this report and project would have been impossible and would never finish on time. A million of thanks to my parent and my family, because give me a lot of moral support and a helping hand.

Last but not least, heartiest gratitude to all course mates, friends and all those has helped in one way or another towards the success of this project.

ABSTRAK

Interactive Multimedia Learning: Photoshop for Beginner ialah suatu teknologi baru yang diimplementasikan dalam bidang pendidikan. Sistem yang dibangunkan ini adalah menggantikan kaedah pembelajaran konvensional dan diharapkan dapat meningkatkan minat pelajar dalam proses pembelajaran. Projek ini mengaplikasikan elemen multimedia dan menghasilkan pembelajaran interaktif bagi Adobe Photoshop bagi peringkat permulaan. Sistem ini penting bagi membantu dan mencipta dimensi baru dalam pembelajaran perisian grafik, Adobe Photoshop. Pada umumnya, projek ini mengkaji berkenaan dengan adaptasi dan integrasi dalam bidang Teknologi Maklumat dan Komunikasi untuk sistem pembelajaran. Projek ini juga dikhhususkan untuk peringkat permulaan tetapi ia boleh diperluaskan jika sistem diteruskan pada masa akan datang.

ABSTRACT

Interactive Multimedia Learning: Photoshop for Beginner is the new technology implement into the education site. The conventional learning method will be replace by this system and hope it could enhance the student interest in learning process. These projects apply the multimedia element and aim to produce an interactive learning of Adobe Photoshop 6.0 for the beginners level. The most important here is to help and create the new dimension for the beginner to learn a graphic software, Adobe Photoshop. This project also studies the adaptation and integration of the field of Information and Communication Technology (ICT) into the learning system. This project is cover for beginner level only but it can widen if the system goes into full swing.

TABLE OF CONTENTS

Thesis Approval status form	
Title page	
Admission	
Dedication	iii
Acknowledgement	iv
Abstract	v
Abstrak	vi
Table of Contents	vii
List of Tables	xii
List of Figures	xiv
Abbreviation	xvi
List of Appendix	xvii

CHAPTER 1 INTRODUCTION

1.1	Preamble / Overview	1
1.2	Problem Statements	1
1.3	Objective	1
1.4	Scopes	2
1.5	Contributions	2
1.6	Expected Output	2
1.7	Conclusion	3

CHAPTER 2 LITERATURE REVIEW

2.1	Introduction	4
-----	--------------	---

2.2	Fact and finding	4
2.2.1	Benefit of Multimedia Courseware	5
2.2.2	Comparisons between web learning and CD Multimedia Learning	8
2.2.3	Why Choose Macromedia Director MX 2004?	8
2.2.4	Screen Snapshots of Existing Similar Systems	10
2.3	Conclusion	12

CHAPTER 3 PROJECT METHODOLOGY AND PLANNING

3.1	Introduction	13
3.2	High level project requirements	13
3.2.1	Software requirements	13
3.2.2	Hardware requirement	14
3.3	System Development Approach	15
3.3.1	Planning	16
3.3.2	Storyboarding	16
3.3.3	Media Component	16
3.3.4	Development	17
3.3.5	Testing	18
3.3.6	Delivery	19
3.5	Project Schedule and Milestones	20
3.7	Conclusion	20

CHAPTER 4 ANALYSIS

4.1	Introduction	21
4.2	Analysis of current system	
4.2.1	Business Process	22
4.2.2	Problem Analysis	22

4.2.3	Problem Statements	26
4.3	Analysis of to Be System	
4.3.1	Functional requirement	26
4.3.2	Technical requirement	27
4.4	Conclusion	40

CHAPTER 5 DESIGN

5.1	Introduction	41
5.2	Raw data	42
5.3	System Architecture	43
5.4	Preliminary design	43
5.4.1	Storyboarding design	45
5.5	User Interface design	50
5.5.1	Navigation design	50
5.5.2	Input design	51
5.5.3	Output design	52
5.6	Conclusion	56

CHAPTER 6 IMPLEMENTATION

6.1	Introduction	57
6.2	Production of implementation	57
6.2.1	Production of texts	58
6.2.2	Production of Graphic	60
6.2.3	Production of Audio	62
6.2.4	Production of Video	63
6.2.5	Production of Animation	65
6.2.6	Production of Integration	66
6.3	Development status	68

6.4	Conclusion	69
-----	------------	----

CHAPTER 7 TESTING

7.1	Introduction	70
7.2	Test Plan	
7.2.1	Test organization	70
7.2.2	Test environment	71
7.2.3	Test schedule	71
7.3	Test Strategy	72
7.3.1	White box testing	72
7.3.2	Black box testing	72
7.3.3	Analysis and evaluation of the White Box Testing	73
7.3.4	Analysis and evaluation of the Black Box Testing	73
7.3.5	Classes of tests	79
7.4	Test design	80
7.4.1	Test description	80
7.4.2	Test data	80
7.5	Test case results	81
7.6	Conclusion	80

CHAPTER 8 ROJECT CONCLUSION

8.1	Introduction	83
8.2	Observation on weaknesses and Strengths	83
8.3	Propositions for improvement	84
8.4	Conclusion	85

REFERENCES	86
-------------------	----

APPENDIX A	88
-------------------	----

APPENDIX B	89
-------------------	----

APPENDIX C	93
APPENDIX D	94
APPENDIX E	97
APPENDIX F	98

LIST OF TABLES

Table No.	Title	Page
1.1	Expected output	3
2.1	Comparison between multimedia courseware	5
2.2	Comparison between web learning and CD learning	8
3.1	Hardware requirement	14
3.2	Software requirement	14
4.1	Analyst problem	23
4.2	System Requirement for Macromedia Director MX 2004	29
4.3	Playback Requirement for Macromedia Director MX 2004	29
4.4	System requirement for Macromedia Flash	31
4.5	Playback requirement for Macromedia Flash	32
4.6	Adobe Photoshop Specification	36
4.7	One Set Multimedia PC specification	37
4.8	Implementation Requirement	40
6.1	Production of texts	58
6.2	Production of graphic	61
6.3	Production of Audio	62
6.4	Production of Video	64
6.5	Development status	69

7.1	Analysis Part A	77
7.2	Analysis Part B	77
7.3	Analysis Part B	78
7.4	Analysis Part C	78
7.5	Analysis Part C	79
7.6	Test description	80
7.7	Test case results	81
8.1	Observation on weaknesses and strengths	84
8.2	Propositions for improvement	84

LIST OF FIGURES

Figure No.	Title	Page
2.1	Screen Snapshot of the Photoshop Guru's Handbook	10
2.2	Screen Snapshot of the Macromedia Director Features overview	11
2.3	Screen Snapshot of the Learning Adobe Photoshop 7 CD-ROM	11
3.1	Multimedia Development Process	15
4.1	One Set Multimedia PC	38
4.2	Scanner	38
4.3	CD-ROMs	40
5.1	System architecture	43
5.2	Main Page Storyboard	45
5.3	Interactive Multimedia Learning Storyboard	46
5.4	Exercise Page Storyboard	47
5.5	Exit Page Storyboard	48
5.6	Selection menus for lesson	49
5.7	Menus learning application	49
5.8	Login page	50

5.9	Correct username and password	51
5.10	Incorrect username and password	51
5.11	Main menu learning page	52
5.12	Interactive Multimedia learning page	53
5.13	Exit page	54
5.14	Exercise page	55
5.15	Exercise Question	56
6.1	Sonic Foundry Sound Force	62
6.2	Sonic Foundry Sound Force Edit menus	63
6.3	Rendering the video file	65
6.3a	Rendering process	65
6.4	Frame by frame animation flash	66
6.5	Frame by frame animation director	66
6.6	Process flows	67
6.7	Integration between director and flash	68
7.1	User authentication base on simple username and password validation	74
7.2	Data validation preformed on the login sub module	74

ABBREVIATION

KUTKM	Kolej Universiti Teknikal Kebangsaan Malaysia
PC	Personal Computer
DVD	Digital Versatile Disk
MB	Mega Byte
RAM	Random Access Memory
CD RW	Compact Disk Rewrite
CD ROM	Compact Disk Read Only Memory
MHz	Megahertz
Mac OS	Macintosh Operating System
GB	Gigabyte
HTML	Hypertext Makeup Language
PSD	Photoshop Document
CPU	Central Processing Unit
IML	Interactive Multimedia Learning
IMLPFB	Interactive Multimedia Learning Photoshop for Beginner
KB	Kilo Byte
ME	Millennium Edition
PSM	Projek Sarjana Muda

LIST OF APPENDIX

App. No.	Title	Page
APPENDIX A	Project Gantt Chart	88
APPENDIX B	User manual	89
APPENDIX C	Testing evaluation sheet	93
APPENDIX D	Questionnaire	94
APPENDIX E	CD cover	97

CHAPTER 1

INTRODUCTION

Objective

CHAPTER 1

INTRODUCTION

1.1 Preamble / Overview

Interactive Multimedia Learning: Photoshop Learning for Beginners is an interactive learning by using Macromedia Director Interfaces. Actually, this project is helping the beginners to learn and get to know the Adobe Photoshop. This project will be the education tool when been applied in the education fields. This project is produced on Compact Disk because not all of the users are accessed to the internet. Actually, there are more learning materials available in the internet but, to get it, users have to be accessed to the internet.

1.2 Problem statements

The Problem with conventional learning method is student make the student feel bored and not interactive. Most of them want something that more interactive yet to understand. The learning material is more on the text and picture only. Besides, Students need to read and it takes a time to learn and understand. The student feels bored and sleepy with the conventional learning method. These are the reasons why the Photoshop Learning for Beginners is developed. It combines the application of the Multimedia elements like text, animation, and video, graphic and audio.

1.3 Objective

The objective of the project is to help create the new dimension for the beginner to learn the graphic software (Adobe Photoshop). The most important thing here is to make the user to understand and interested in learning the Adobe Photoshop for the

Beginner level. The user of this system will be learning interactively using the application. The learning application will be produced on CD format.

1.4 Scope

For the meantime, this project is to be developed only for the beginners level. The user of the system may be student and anyone who wish to learn Adobe Photoshop. For this project only provides the syllabus for the beginner level.

1.5 Contribution

The contribution of the project is to apply the multimedia element on learning application. Although, many conventional learning available on website and this is a new approach for user adapt in multimedia environment. The multimedia element is text, animation, video, audio and graphic were fully apply on this learning lesson. The other benefits are the application of the theory from the classes session and more understanding to use the software.

1.6 Expected output

The expected output of the project is the learning application of Adobe Photoshop on multimedia environment. The output can be use as learning tool to the user. The output will cover the item below;

Output expected	Output description
Login page	User need to login before enter the system
Exit page	Let the user to quit the system with confirmation
Learning page	Interactive animation for user to learn and provide audio background
Video animation	Develops using 3ds max fro 3D book and animate it.
Navigation button	Let user to press the button to preview page and it user friendly.

Table 1.1 Expected output

1.7 Conclusion

After determining the objectives of the project, this has led to clear identification of the project scope thus providing a complete guideline for the development of the system prototype by narrowing down the scope of the research. The studies on the feasibility of the research project have tremendously helped us to identify the critical points and resources needed in delivering the project and making sure that the prototype is meeting the requirements and specification and at the same time avoiding unnecessary wastage of resources and time.

CHAPTER 2

LITERATURE REVIEW

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Interactive Multimedia Learning Application is more available on the internet. There are many website that provide the learning application. However, not all of the users have access to the internet. This is the reason why the project is being developed on a Compact Disk. Users just need to open the CD to learn the subject. By this way, it is very easy for user to adapt with the learning application. This project contains the learning syllabus for Beginner level only. The system provides example, tutorial and selection subtopics of the Photoshop learning. Most of the online systems just provide more on the direction by using text and picture to guide the user. Photoshop Learning for Beginners is actually as the tool to help the student or user to become more interested in the learning session. The data and information for developing this project is captured from the internet and reference by textbook.

2.2 Fact and finding

During the research, the multimedia courseware is providing benefit to the users. The most important once is adaptation the user into the multimedia environment learning. The research of project is done by surveying on the website learning for the multimedia benefits and finding the textbook at library or resource center. The fact on research has found the benefit of multimedia courseware. The detail on multimedia courseware is below:

2.2.1 Benefits of Multimedia Courseware

Multimedia courseware has largely been accepted as an avenue to provide students with an effective independent learning experience: Marchionini (1988) states that cognitive skills are enhanced with multimedia; Tan and Nguyen (1992) believe that multimedia makes the learning process more interesting and stimulating, while at the same time greatly increases the rate of learning and knowledge retention. Gibbons (1990) argues that by enabling students to link data, information and ideas, interactive multimedia helps to make the connections that are critical to learning.

This section provides a short description of the key benefits of learning using an interactive multimedia courseware. The list is meant to assist in understanding about how the adoption of multimedia for training and education could enhance the learning process and help achieve measurable performance results

Interactive Multimedia Learning: Photoshop for Beginner	Others * Multimedia Courseware
-Attractive and interactive learning. -tutorials and exercises available in animated form.	- Facilitates interactive learning - Normal tutorials and quizzes.
-Deliver with CD ROM	-Web application.
-Hassles installation	-More complicated installations.
-Module based.	-Module based.
-More practical tutorials.	-Less practical tutorials
-Easy to control.	-Hard to control.
-Engaging	-Less Engaging
-Cost-effective	-Cost effective

*Others refer to the Photoshop Guru's Handbook website, Macromedia Director Step-by-Step website and Learning Adobe Photoshop 7 CD ROM website

Table 2.1 Comparisons between multimedia Courseware

The following are common benefits in using multimedia courseware. The following are common benefits in using multimedia courseware for details.

(a) Improves Learning