Universiti Utara Malaysia
06050 Sintok, Kedah Darul Aman.

GUIDELINES IN PREPARING FOR COURSEWARE DEVELOPMENT FOR MULTIMEDIA SUBJECTS IN SCHOOLS IN MALAYSIA

By

Rozaina Bt Ghazali
GUIDELINES IN PREPARING FOR COURSEWARE DEVELOPMENT FOR MULTIMEDIA SUBJECTS IN SCHOOLS IN MALAYSIA

ROZAINA BT GHAZALI

UNIVERSITI UTARA MALAYSIA
2008
GUIDELINES IN PREPARING FOR COURSEWARE DEVELOPMENT FOR MULTIMEDIA SUBJECTS IN SCHOOLS IN MALAYSIA

A Thesis submitted to the Graduate School in full fulfillment of the Requirements for the degree of Doctor of Philosophy
Universiti Utara Malaysia

by
Rozaina Bt. Ghazali
KOLEJ SASTERA DAN SAINS
(College of Arts and Sciences)
Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PROJEK
(Certificate of Project Paper)

Saya, yang bertandatangan, memperakukan bahawa
(I, the undersigned, certify that)

ROZAINA GHAZALI
(87042)

calon untuk ijazah
(candidate for the degree of) MSc. [Information Technology]

telah mengemukakan kertas projek yang bertajuk
(has presented his/her project paper of the following title)

GUIDELINES IN PREPARING FOR COURSEWARE DEVELOPMENT
FOR MULTIMEDIA SUBJECTS IN SCHOOLS IN MALAYSIA

seerti yang tercatat di muka surat tajuk dan kulit kertas projek
(as it appears on the title page and front cover of project paper)

bahawa kertas projek tersebut boleh diterima dari segi bentuk serta kandungan
dan meliputi bidang ilmu dengan memuaskan.
(that the project paper acceptable in form and content, and that a satisfactory
knowledge of the field is covered by the project paper).

Nama Penyelia Utama
(Name of Main Supervisor): DR. NOR LAILY HASHIM

Tandatangan
(Signature) : [Signature] Tarikh (Date) : 23-11-08

Nama Penyelia Kedua
(Name of 2nd Supervisor): MDM. NOOR IZZAH YAHYA

Tandatangan
(Signature) : [Signature] Tarikh (Date) : [Signature]
PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a postgraduate degree from Universiti Utara Malaysia, I agree that the University Library may make it freely available for inspection. I further agree that permission for copying of this thesis in any manner, in whole or in part, for scholarly purpose may be granted by my supervisor(s) or, in their absence by the Dean of the Graduate School. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from my thesis.

Requests for permission to copy or to make other use of materials in this thesis, in whole or in part, should be addressed to

Dean of Graduate School
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman.
ABSTRACT

Computer-based for teaching and learning has becoming more popular and widely accepted. Interactive presentation with animations for knowledge transfer is more effective and viable compared to conventional diagrams. Developing a methodology for developing teaching and learning courseware for selected topic of Multimedia is the main objective of this research. The teaching and learning courseware is developed for a Form 2. The multimedia and interactive presentation by the courseware would expedite the learning and understanding process. Besides that, it would motivate the students to explore further. Formative evaluation will be done along with the development phase to ensure the courseware practically used. In conclusion, the courseware developed will fulfill the important criteria in attracting attention, fun and motivation in learning process.
ACKNOWLEDGEMENTS

First of all I am thankful to Allah SWT for giving me the courage, ability, and strength to complete this project.

I would like to extend my thanks and gratitude to:

My supervisors Dr Nor Laily Hashim and Madam Noor Izzah Yahya for their wonderful supports and efforts in assisting me carrying out this research project to become a reality. Their encouragement help shaped the direction of my work.

My beloved husband, Mr. Mohd Basir Ibrahim and my children Fatin, Farah and Fairuz, for their love and patience. Special thanks to my mother, Marziah bt Abdullah for her supports and love.

Teachers and staffs at SMK Bandar Bukit Kayu Hitam, for their supports, encouragement and collaboration in sharing ideas during this project.

Everybody that is involved in my project directly or indirectly for productive interactions and for their supports.
TABLE OF CONTENTS

PERMISSION TO USE i
ABSTRACT ii
ACKNOWLEDGEMENTS iii
TABLE OF CONTENT iv
LIST OF FIGURE vii
LIST OF TABLES viii

CHAPTER ONE

INTRODUCTION 1

1.1 Problem Background 2
1.2 Problem Statement 4
1.3 Research Questions 4
1.4 Research Objectives 4
1.5 Scope Of Study 5
1.6 Significance Of Study 6
   1.6.1 Teachers 6
   1.6.2 Students 6
1.7 Limitations Of Study 7
1.8 Conclusion 7
CHAPTER 2
LITERATURE REVIEW

2.1 Definition Of Multimedia

2.2 Features Of Multimedia
2.2.1 Interactive courseware
2.2.2 Motivating courseware
2.2.3 Attracting courseware

2.3 Advantages Of Multimedia

2.4 Multimedia And Usability

2.5 Existing Courseware

2.6 Conclusion

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

3.2 Phase 1: Identify The Problem Of The Assisting Teaching And Learning Process

3.3 Phase 2: Data Collection

3.4 Phase 3: Courseware Development Methodology

3.5 Phase 4: Evaluation Process

3.6 Summary
CHAPTER 4
COURSEWARE DESIGN

4.1 Introduction

4.2 Result Of Courseware Presentation

4.3 Macromedia Authorware Authoring Tool

4.4 Courseware Presentation

4.5 Summary

CHAPTER 5
RESULT AND FINDING OF COURSEWARE EVALUATION

5.1 Introduction

5.2 Data Analysis On The Usability Of The Courseware

5.3 Conclusion

CHAPTER 6
CONCLUSION

6.1 Overview

6.2 Limitation Of The Courseware

6.3 Recommendation For Future Work

REFERENCES

APPENDICES
LIST OF FIGURES

Figure 1.1: The Traditional Teaching 2
Figure 3.1: Methodology's Model Of Courseware Development 16
Figure 4.1: Introduction Screen 26
Figure 4.2: Objective Screen 27
Figure 4.3: Menu Screen 28
Figure 4.4: Module Screen 29
Figure 4.5: Exercise Screen (Formative) 30
Figure 4.6: Exercise Screen (Summative) 31
Figure 4.7: Summary Screen 32
Figure 4.8: Exit Screen 33
Figure 4.9: Interface Of Macromedia Authorware 7.0 34
Figure 4.10: Working Area Of Macromedia Authorware 35
Figure 4.11: First Screen Of An Authoring Process 36
Figure 4.12: Authoring Screen Of An Objective And Menu 37
Figure 4.13: Authoring Screen Of Topic 1 38
Figure 4.14: Introduction Screen 39
Figure 4.15: Objective Screen 40
Figure 4.16: Menu Screen 41
Figure 4.17: Objective Of Topic 1 42
Figure 4.18: Content Area Of Topic 1. 43
Figure 4.19: Summary Of Topic 1. 44
Figure 4.20: Formative Exercise Screen Of Topic 1 45
Figure 4.21: Feedback Screen 46
Figure 4.22: Content Screen For Topic 2 47
Figure 4.23: Formative Exercise Screen Of Topic 2 48
Figure 4.24: Exercise Of Topic 3 49
Figure 4.25: Summative Exercise Screen 50
Figure 4.26: End Screen 51
LIST OF TABLES

Table 5.1: Frequency Table For User Evaluation On Traditional Teaching  54
Table 5.2: Frequency Table For User Evaluation On Teaching Process  55
Table 5.3: Frequency Table For Evaluation On Courseware Contents  56
Table 5.4: Frequency Table For Evaluation On Traditional Learning  57
Table 5.5: Frequency Table For Student’s Evaluation On Learning Process  58
Table 5.6: Frequency Table For Student’s Evaluation On The Contents Of The Courseware  59
CHAPTER 1
INTRODUCTION

Multimedia is a media that comes from a combination of different content from various forms. In general, multimedia includes a combination of text, audio, still images, animation, video, and interactivity content forms. It is used in many aspects to present contents to audience. It is very widely used in the world for example in education, medical, airports, business and others.

The use of multimedia courseware as part of a teaching strategy has many potential benefits that relate to learners, instructors, the learning content, the learning process and to access to learning. However, quality learning outcomes can only be achieved with the considered application of pedagogy to the design of the learning content as well as to the management of the learning process that revolves around its use. Instructors and instructional designers must pay attention not only to the creation of content but also to the broader embedding context within which the courseware will be used.

The bottom line is that students stand to gain from a broader and richer learning experience that not only helps them achieve their education objectives but which also makes learning an enjoyable and intrinsically rewarding experience.
The contents of the thesis is for internal user only
REFERENCES


