READING SKILL TEACHING AID USING PHONIC

MAZURA SHAREENA BINTI MD SAID

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

BORANG PENGESAHAN STATUS TESIS *

JUDUL: READING SKILL TEACHING AID USING PHONIC

SESI PENGAJIAN: 2009

Saya MAZURA SHAREENA BINTI MD SAID

(HURUF BESAR)

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

- 1. Tesis dan projek adalah hakmilik Universiti Teknikal Malaysia Melaka.
- 2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
- Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajiab tinggi.
 ** 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) (TANDATANGAN PENYELIA) Alamat tetap:No.32 Taman LKNP Peringkat 04, 27000 Jerantut, **Pahang** Tarikh:13 Julai 2009 Tarikh: CATATAN: *Tesis dimaksudkan sebagai Laporan Akhir Projek Sarjana Muda(PSM) **Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada

pihak berkuasa

READING SKILL TEACHING AID USING PHONIC

MAZURA SHAREENA BINTI MD SAID

This report is submitted in partial fulfillment of the requirement for the Bachelor of Computer Science (Interactive Media)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY UNIVERSITI TEKNIKAL MALAYSIA MELAKA 2009

DECLARATION

I hereby declare that this project report entitled

READING SKILL TEACHING AID USING PHONIC

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT	&	Date : 14 Julai 00
	(MAZURA SHAREENA BINTI MD SA	AID)
SUPERVISOR	:	Date :
	(PUAN FARAH NADIA BINTI AZM	AN)

DEDICATION

To my beloved parent...

ACKNOWLEDGEMENTS

Alhamdulillah to Allah SWT as I successfully finish my Project Sarjana Muda (PSM) without His acquiescence I would not be able to finish my Project Sarjana Muda.

Firstly, I would like to express my gratitude towards Puan Farah Nadia binti Azman, who has guided and teaches me on my mission to complete the PSM, without her guidance I will be lost. I have furthermore to thank to my evaluator Encik Shahril bin Parumo, who help me in giving suggestion for improvement, without him it is like impossible to finish my PSM.

Secondly, I would like to thanks to all lecturers of the faculty of Information and Communication Technology as they have teach me since I have been study at the Universiti Teknikal Malaysia Melaka (UTeM). Without them I could never completing my study.

Last but not least, I would like to thank to my family and friends for their moral support and help me when I am in need. To all individual who has directly or indirectly support me.

Thank you.

ABSTRACT

There are many ways to teach children's to read and one of them is phonic method. Phonic method is a system or method which is teaching the children for prereading to read by pronouncing the letter. "Seronoknya Membaca" courseware was developed to teaching reading using phonic method in interactive way and systematic such as the lesson will taught step by step start from learn to know and pronounce the alphabet through can pronounce open and close syllable sound. This courseware consists of three modules which is Learning Module, Exercise Module and Games Module. Learning module consist of two phase which is Part 1 and Part 2. In Part 1, the learning contents are divided into 8 lessons which is children will teach to know and pronounce the alphabet. In part 2, children will learn to pronounce closed and open syllable sound. Exercise module divide to exercise one, exercise two and exercise three. Exercise module is a module that tests the user understanding. In exercise one; children need to listen to sound provided and match the alphabets to the sound. In exercise two and three, children also need to listen to sound provided and match the closed and open syllable sound. In games module, there are two provided games which is Color Time and Jigsaw Puzzle games. The purpose of the games being created is for give the entertainment to the target user which is children age 3 to 6 years old. In developing this courseware, the software used is Adobe Flash CS3. This courseware was developed in Malay version.

ABSTRAK

Terdapat pelbagai cara untuk mengajar kanak-kanak membaca dan salah satu daripadanya adalah menggunakan kaedah fonik. Kaedah fonik adalah satu kaedah yang mengajar kanak-kanak untuk membaca dengan mengenal bunyi huruf terlebih dahulu. CD pembelajaran "Seronoknya Membaca" dibangunkan untuk mengajar membaca menggunakan kaedah fonik dalam bentuk interaktif dan sistematik contohnya pengajaran akan di ajar langkah demi langkah bermula dengan mengenal bunyi huruf seterusnya mengenal bunyi suku kata terbuka dan tertutup. CD pembelajaran ini mengandungi tiga modul iaitu Modul Belajar, Latihan dan Permainan. Modul Belajar terdiri daripada dua fasa iaitu Bahagian 1 dan Bahagian 2. Di bahagian 1, pembelajaran terbahagi kepada 8 modul iaitu mengenal bunyi-bunyi huruf. Pengguna akan belajar mengenal bunyi suku kata tertutup dan terbuka di bahagian 2. Modul latihan terbahagi kepada latihan satu, latihan dua dan latihan tiga. Modul latihan adalah satu modul untuk menguji kefahaman pengguna. Dalam modul permainan, terdapat dua permainan iaitu Mari Mewarna dan Puzzle. Modul permainan bertujuan untuk memberi hiburan kepada pengguna iaitu kanak-kanak berusia 3 hingga 6 tahun. Perisian yang digunakan untuk membangunakan CD pembelajaran ini adalah Adobe Flash CS3. CD Pembelajaran Seronoknya Membaca ini adalah dalam versi Bahasa Melayu.

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE			
	DECLARATION	i			
	DEDICATION	ii			
	ACKNOWLEDGEMENT	iii			
	ABTRACT	iv			
	ABTRAK	v			
	TABLE OF CONTENTS	vi			
	LIST OF TABLES	xi			
	LIST OF FIGURES	xii			
CHAPTER I	INTRODUCTION				
	1.1 Project Background	1			
	1.2 Problem Statement	2			
	1.3 Objective	2 3 3 4 5			
	1.4 Scope	3			
	1.5 Project Significance	4			
	1.6 Conclusion	5			
CHAPTER II	LITERATURE REVIEW & PROJECT				
	METHODOLOGY				
	2.1 Introduction	6			

	2.2	Doma	in		6
		2.2.1	Reading	Teaching Aid for	
			Pre-Sch	ool Children	7
		2.2.2	Phonic	Technique	8
	2.3	Existi	ng Systen	n	9
		2.3.1	CD-lear	ning	
			"Pandu	an Bacalah Anakku"	9
		2.3.2	CD-lear	ning	
			"Learni	ng to Read with Phonics 1	13
		2.3.3	Compar	ison of Existing System	14
	2.4	Projec	t Method	ology	17
		2.4.1	Instruct	ional Design	19
			2.4.1.1	Educational Goals	19
			2.4.1.2	Course Map / Flowchart	20
			2.4.1.3	Detailed Course Content	20
			2.4.1.4	Test Question	21
			2.4.1.5	Metaphor	22
	2.5	Projec	t Require	ement	22
		2.5.1	Softwar	e Requirement	22
		2.5.2	Hardwa	re Requirement	22
	2.6	Concl	usion		23
CHAPTER III	AN	ALYSI	S		
	3.1	Curre	nt Scenar	io Analysis	24
	3.2	Requi	rement A	nalysis	26
		3.2.1	Project	Requirement	26
			3.2.1.1	Need Analysis	26
			3.2.1.2	User Analysis	26

			3.2.1.3 Technical Analysis	27
			3.2.1.4 Resource Analysis	28
			3.2.1.5 Requirement Gathering	28
		3.2.2	Software Requirement	29
		3.2.3	Hardware Requirement	30
	3.3	Projec	et Schedule and Milestones	31
	3.4	Concl	usion	32
CHAPTER IV	DES	SIGN		
	4.1	Introd	uctions	33
	4.2	System	m Architecture	34
		4.2.1	Learning Module	35
		4.2.2	Exercise Module	35
		4.2.3	Games Module	35
	4.3	Prelin	ninary Design	36
		4.3.1	Storyboard Design	36
		4.3.2	Numbering	39
		4.3.3	Title	39
		4.3.4	Screen	39
		4.3.5	Graphic Instruction	39
		4.3.6	Media instruction	40
	4.4	User !	Interface Design	40
		4.4.1	Navigation Design	45
		4.4.2	Input Design	46
		4.4.3	Output Design	46
		4.4.4	Metaphors	46
	4.5	Concl	usion	47

CHAPTER V	IMPLEMENTATION				
	5.1	Introductions	48		
	5.2	Media Creation	48		
		5.2.1 Production of Texts	49		
		5.2.2 Production of Graphics	50		
		5.2.3 Production of Audio	53		
		5.2.4 Production of Animation	55		
	5.3	Media Integration	57		
	5.4	Product Configuration Management	57		
		5.4.1 Configuration Environment Setup	58		
		5.4.2 Version Control Procedure	58		
	5.5	Implementation Status	58		
	5.6	Conclusion	60		
CHAPTER VI	TES	ESTING			
	6.1	Introductions	61		
	6.2	Test Plan	62		
		6.2.1 Test User	62		
		6.2.2 Test Environment	63		
		6.2.3 Test Schedule	63		
		6.2.4 Test Strategy	64		
	6.3	Test Implementation	66		
		6.3.1 Test Description	66		
		6.3.2 Test Data	66		
		6.3.3 Test Result and Analysis	66		
		6.3.4 Analysis Testing	69		
	6.4	Conclusion	71		

CHAPTER VII PROJECT CONCLUSION 7.1 Observation on Weaknesses and Strengths 72 7.1.1 Weaknesses 72 7.1.2 Strengths 73 7.2 Propositions for Improvement 74 7.3 Contribution 75 7.4 Conclusion 75 **REFERENCES** 76 **BIBLIOGRAPHY** 77 APPENDIX A 78 APPENDIX B 80 APPENDIX C 96 APPENDIX D 125 APPENDIX E 134 APPENDIX F 137 **APPENDIX G** 140

LIST OF TABLES

TAB	LE TITLE	PAGE
2.1	Comparison between existing products and develop product	16
2.2	PC Requirement	23
3.1	Project Milestone	32
5.1	Steps to make Glow Effect Text	50
5.2	Description on the Implementation Status	60
6.1	Product Test Schedule	63
6.2	Average Evaluation of Questionnaires	67
6.3	Evaluation of Pre-Test Question	68
6.4	Evaluation of Post-Test Question	68

LIST OF FIGURES

DIAGI	RAM TITLE	PAGE	
2.1	Interface of CD Panduan Bacalah Anakku	10	
2.2	Interface of first part of the learning	10	
2.3	Interface of learning content in book one	11	
2.4	Interface of teaching pronounce letter A	11	
2.5	Interface of eight part of the learning	12	
2.6	Interface of learning content in book eight	12	
2.7	Interface of learning content in part two which is		
	closed syllable sound	13	
2.8	Interface of learning content in part two which is		
	opened syllable sound	13	
2.9	Interface of CD "Learning to Read with Phonics		
	- Letter and Word"	14	
2.10	Interface of leaning to write letter A	14	
2.11	Interface of CD "Learning to Read with Phonics 1		
	- Letter and Word"	15	
2.12	Interface of Starfall.com	16	
2.13	Flow Chart of ADDIE Model	17	
2.14	Course Map of the Courseware	20	
3.1	The flow of CD "Panduan Bacalah Anakku"	25	
3.2	An interface of colorful children software		

4.1	System Architecture of the courseware	35
4.2	The example of a storyboard	39
4.3	Interface of Main Menu	41
4.4	Interface of Learning Module	42
4.5	Interface of Learning Module Part 1	42
4.6	Interface of Learning Module Part 2	43
4.7	Interface of Learning Content	43
4.8	Interface of Learning Content	44
4.9	Interface of Exercise Module	44
4.10	Interface of Games Module	45
4.11	Navigation Design of the courseware	46
5.1	Import Home in Bitmap	52
5.2	Choose Properties Value	52
5.3	Draw with Line Tools	53
5.4	Complete Home	53
5.5	Sample Rate of Recorded Audio	54
5.6	Record the voice using Adobe Audition 1.5	55
5.7	Using Hiss Reduction to remove the noise	55
5.8	Voice after apply hiss reduction	56
5.9	Tweening Techniques	57
5.10	Masking Technique	57
5.11	Masking Effect	58
6.1	Graph for Average Evaluation of Questionnaires	69
6.2	Graph for the Result of Pre-Test	70
6.3	Graph for the Result of Post-Test	71

CHAPTER I

INTRODUCTION

This chapter contains project background, problem statement, objective, scope, project significant, and the conclusion of this chapter. Project background describes briefly about the project that will be developed. The problem statement will state the problem that encountered in the existing system or current system. For the objective, it is about the aim for the development of the system in order to solve the problem in the existing system while the scope covers a target user and module of the system. Project significant will describe the benefit of system for the user. Lastly, the conclusion will summarizes this chapter an introduction of next chapter.

1.1 Project Background

Learning process based on books and class rooms are usually way to teach each student. Therefore, with other way which is using "Technology in Education" learning strategy, it can help the student to increase their understanding in interactive and interesting way. "Technology in Education" learning strategy is other way can be applied to perpetuate old models of teaching and learning. This learning strategy can attract the student by using CD-based or Web-based learning courseware or others.

Nowadays, usually, children learn to read by using books or learn through their parents. So, to make a change of these learning, the researcher planning to develop a project in the "Projek Sarjana Muda" which is courseware to help the children read in interactive and interesting way. The project is a CD-based learning courseware that entitles "Seronoknya Membaca".

There are many ways to teach children's to read and one of them is phonic method. Phonic method is a system or method which is teaching the children for prereading to read by pronouncing the letter. Phonic method emphasizes each alphabet sounds exist in language. Each alphabet having certain sounds and there are also alphabets which possess more than one chief sound.

The target user of this courseware is children age 3 to 6 years old who is starting to learn reading. The objectives to develop this courseware are to teach children to read step by step in interactive and interesting way using phonic technique and then test their ability by using pre-test and post-test. To evaluate the user understanding, exercise and games are provided.

1.2 Problem Statement

Nowadays, usually pre-reading children learn to read by using books or learn through their parents. There were some CD learning sold in the market, but lack of interest because it is a linear application which is it is a video only and not interactive. Children have to learn straightly and if they wish to learn again, they have to stop and play the CD again. This CD also not contains another module likes exercise or quiz.

Because of that, the developer want to come out or produce a courseware that teaching reading using phonic method in interactive way because from this way, the lesson will be taught more organizing and systematic such as the lesson will taught step by step start from learn to know and pronounce the alphabet through can pronounce open and close syllable sound. This courseware also provides three exercises to evaluate user understanding. Hope that this courseware can help the children learn reading in a short time because it is interactive media content and more interesting.

1.3 Objective

The project objectives are:

- To develop a CD-based learning courseware that teaches children's to read in interactive and interesting way.
 - This CD-based learning courseware is an efficient teaching aid to teach children because they can learn reading in step by step in interactive way and it can attract their interest.
- ii) To apply Phonic learning technique in the courseware.
 - Phonic learning technique is a good way to teach children to read because this technique have a few phases start of know vowel letter up to can read.
- iii) To test the children's ability to read after use the courseware
 - Pre-test and post-test will be use to test the children's ability whether they
 can understand or not what they learn in the courseware.

1.4 Scope

The project scopes are:

- i) Target user
 - The target user of this courseware is children ages 3 to 6 years old with their teachers or parent guidance.

ii) Module

- This project is a CD-based learning courseware that teaches children how to read step by step in interactive and interesting way using phonic technique. This courseware will be develop in Malay version. This courseware consists of three phases which are teaching, exercises and games. In teaching phases, there are a few modules that teach children to know and pronounce the alphabet or words. In exercises module, there are three exercises provided and two games in games module. This project will be developed by using Adobe Flash CS3.

iii) Limitation

- There are a few limitations in developing this project which is the scope of user for this project is limited to only children aged 3-6 years only.
- This project needs to be run on a computer; which becomes the limitation to those who can afford to have a computer at home and lastly, this project can only be executed on Windows based platform.

1.5 Project Significance

This project can give benefit to the user which is children's ages 3 to 6 years old because from the courseware that was developed, they can know and pronounce letter A to Z and also can learn how to read in interactive way and this can help they learn happily and quick to understand what they learn about. Besides that, this courseware is for general used and can be used by whosoever. This courseware can attract interest of pre-reading children.

1.6 Conclusion

As a conclusion, this chapter described the whole things for developing the project such as the project background, objective, scope, problem about existing product and project significance. The next chapter will describe about methodology that used in this project so that the task will be completed in a time given and follow the certain phases. Besides that, next chapter will describes all the analysis and findings which are related research, case study and other findings that are related to this project.

CHAPTER II

LITERATURE REVIEW & PROJECT METHODOLOGY

2.1 Introduction

This chapter will discuss the analysis about existing application that similar or related to the project. Literature review will focus on the research of the existing and future application. Literature review is a process of searching, collecting, analyzed of current knowledge on a particular topic. It describes all the analysis and findings which are related research, case study and other findings that are related to this project. In addition, it also consist the knowledge of the project elements such as domain specification, techniques and how these elements related and combined to each other.

Methodology is the key of succeeding of finishing a project within time and being able to satisfy user's requirement. It is also a description of the selected approach that will be used when developing the project. Every step in the selected methodology will be justified to suit every task. Since there are many kind of methodology, it is vital to select appropriate methodology that will be used.

2.2 Domain

The domains of this project are reading teaching aid for pre-school children and phonic methods.

2.2.1 Reading Teaching Aid for Pre-School Children

A teaching aid is a tool used by teachers, facilitators, or tutors to help learners improve reading and other skills, illustrate a skill, fact, or idea, and relieve anxiety, fears, or boredom, since many teaching aids are like games. Here are some kinds of teaching aids for pre-school children:-

2.2.1.1 Alphabet Book

According to Barnwell, Katharine (1995), an alphabet book is a collection of pages that lists and illustrates the entire alphabet. Alphabet books are sometimes used as motivational tools to attract children's attention to books. Besides that, it's used to introduce the sounds and letters of an alphabet and to help transfer reading skills from one language to another.

2.2.1.2 Alphabet Chart

An alphabet chart is a single page that lists the entire alphabet, or selected parts of the alphabet. An alphabet chart is useful for displaying the alphabet letters, either on a wall or as part of a book. An alphabet chart usually contains a keyword using the letter, an illustration of the keyword, and the letter in small and capital letters.

2.2.1.3 Flash Card

A flash card is part of a set of cards on which are written items to be studied. They are "flashed" or shown quickly one by one to a learner to elicit a quick response. Flash cards are useful for drilling new letters, syllables, words, and other information. They are normally used in a classroom, but can also be used more informally. Flash cards can be made from index cards, cover or card stock and other heavy paper. (Brown, Gay. 1984)

Computers and other equipment such as video, CD and audio cassettes can also be used as teaching aids.

2.2.2 Phonic Technique

Phonic method is a system or method which is teaching the children for prereading to read by pronouncing the letter. Phonic method emphasizes each alphabet sounds exist in language. Each alphabet having certain sounds and there are also alphabets which possess more than one chief sound.

An alphabetic, phonic approach to teaching reading has been used for centuries. In the 19th century, this kind of approach began to be called "phonics". Since then it has been further developed and modified. Today a phonics approach is used in varying degrees in most reading methods.

A phonic approach to reading is an approach that teaches the relation of the letters (graphemes) to the sounds (phonemes) they represent to teach reading. (Halvorson 1992)

The theory behind the phonic approach is based on two assumptions which is most languages have consistent phoneme (sound) to grapheme (letter) correlation and once learners have learned the relationships of the letters to the sounds, they can pronounce printed words by blending the sounds together. (Aukerman 1984)

Most teachers are acquainted with several approaches to phonics instruction, including those listed below. The distinctions between approaches are not absolute, and some programs of instruction combine approaches. Here are some kinds of phonic approaches:-

i) Synthetic phonics - Children learn how to convert letters or letter combinations into sounds, and then how to blend the sounds together to form recognizable words.