

Universiti Teknologi MARA

Remedial Program Learning Application

Nor Anis Sofia Mohd Hasazli

**Thesis submitted in fulfilment of the requirements for
Bachelor of Information Technology (Hons.)
Faculty of Computer and Mathematical Sciences**

JANUARY 2020

STUDENT DECLARATION

I certify that this thesis and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

.....
NOR ANIS SOFIA BINTI MOHD HASAZLI
2016701007

JANUARY 3, 2020

ABSTRACT

Remedial program was created by Ministry of Education Malaysia that help remedial pupils who are struggle or slow learner in basic learning. Therefore, there were problems that faced by remedial pupils which were they have learning problem, unable to understand basic concept in Mathematic subject, and easy loss concentration and focus. Based on these issues, the aim of this research was to develop a Remedial Program Learning Application (RPLA) to help pupils in learning Mathematic session. A preliminary investigation (PI) was conducted at early stage to identify the existing materials teaching, learning styles of remedial program and finding suitable contents of Mathematic learning. The objectives of this research are to identify multimedia principle and Child Computer Interaction (CCI) principle in term of familiarity by design and develop a RPLA with Mathematic subject learning to evaluate interface design using Expert Review and Quasi Experiment for effectiveness of RPLA application. The methodology that applied was ADDIE Model. ADDIE Model consists of five phases which were Analysis, Design, Development, Implementation and Evaluation. The development of RPLA was constructed using Unity, Audacity and Adobe Photoshop. The learning application yields a positive impact to be effectiveness for remedial pupils in primary schools for Mathematic learning.

TABLE OF CONTENTS

CONTENT	PAGE
SUPERVISOR APPROVAL	i
STUDENT DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	ix
LIST OF TABLES	xi
CHAPTER 1 INTRODUCTION	1
1.1 Background of Study	1
1.2 Preliminary Investigation	2
1.2.1 Pupils	3
1.2.2 Teachers	8
1.2.3 Implication of Preliminary Investigation	13
1.3 Problem Statement	13
1.4 Objectives	14
1.5 Project Scope	15
1.6 Project Significant	15
1.7 Summary	16
CHAPTER 2 LITERATURE REVIEW	17
2.1 Remedial Program	17
2.1.1 Teaching Approach	18
2.1.2 Learning Approach	19
2.1.3 Mathematic Learning and Syllabus	19
2.2 Implication of Remedial Program	20
2.3 Mobile Application	20
2.3.1 Platform of Mobile Application	20
2.3.2 Mobile Learning Type	21
2.3.3 Mobile Application in Education	22
2.3.4 Implication of Mobile Application	22

4.1.1	Functional Requirement	50
4.1.2	Non-Functional Requirement	51
4.2	Hardware and Software Requirement	52
4.2.1	Hardware Requirement	52
4.2.2	Software Requirement	53
4.3	Design Development	54
4.3.1	Site Map	54
4.3.2	Storyboard	56
4.4	Multimedia Development.....	58
4.4.1	Graphic	58
4.4.2	Audio and Sound.....	58
4.4.3	Animation.....	58
4.4.4	Navigation	59
4.4.5	Coding	59
4.5	User Interface Design.....	60
4.5.1	Main Menu Frame	60
4.5.2	Sub-Menu Learning.....	61
4.5.3	Sub-Menu Activity	61
4.5.4	Learning Page of Ascending Order	62
4.5.5	Activity Page of Ascending Order	63
4.5.6	Pop Up Correct Answer	63
4.6	Summary	64
CHAPTER 5 RESULT AND FINDING		65
5.1	Expert Review	65
5.1.1	Procedure.....	66
5.1.2	Findings.....	67
5.1.3	Analysis.....	70
5.2	Refinement	76
5.3	Quasi-Experiment.....	80
5.3.1	Pre-Test	80
5.3.2	Post-Test.....	82
5.3.3	Summary of Quasi-Experiment.....	84