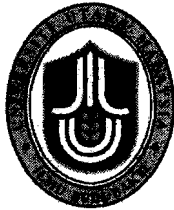


**BASIC COMPONENTS IN CREATING CONTENTS
FOR MATHEMATICS SUBJECT
USING DIGITAL WAYANG KULIT:
A CONCEPTUAL MODEL**

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**UNIVERSITI UTARA MALAYSIA
2011**



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**BASIC COMPONENTS IN CREATING CONTENTS FOR MATHEMATICS
SUBJECT USING DIGITAL WAYANG KULIT: A CONCEPTUAL MODEL**

A project submitted to Dean of Awang Had Salleh Graduate School of Arts and Sciences
in partial fulfilment of the requirement for the degree
Master of Science (Information Communication and Technology)
Universiti Utara Malaysia

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ABSTRAK (BAHASA MALAYSIA)

Penyelidikan ini bertujuan untuk membangunkan model konseptual yang menggambarkan bagaimana pendekatan multimedia boleh digunakan untuk meningkatkan pengajaran dan pembelajaran mata pelajaran Matematik di sekolah rendah serta mengekalkan warisan budaya iaitu Wayang Kulit dalam kalangan generasi muda. Prototaip akan dibangunkan untuk menunjukkan bagaimana kandungan mata pelajaran Matematik tahun satu di sekolah rendah dapat dipindahkan ke dalam bentuk multimedia. Prototaip ini dibangunkan dalam bentuk Wayang Kulit digital untuk menyajikan kandungan berdasarkan sukatan pendidikan matematik dengan menggunakan watak-watak dalam Wayang Kulit.

ABSTRACT (ENGLISH)

This research intends to develop a conceptual model that illustrates how multimedia approaches could be used to enhance teaching and learning of a Mathematics subject in primary school as well as to preserve *Wayang Kulit* in younger generation. A prototype will be developed to demonstrate how the content of a standard one Mathematics subject in primary school could be transferred into multimedia form. The prototype is developed in a form of Digital *Wayang Kulit* to present the contents based on the syllabus of Mathematics education using the actors of *Wayang Kulit*.

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TABLE OF CONTENTS

PERMISSION TO USE	i
ABSTRAK	ii
ABSTRACT	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
APPENDICES	vii
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATION	x
CHAPTER 1 : INTRODUCTION	1
1.1 Introduction	1
1.2 Problem Statement	2
1.3 Research Questions	3
1.4 Research Objectives	3
1.5.1 Scope of User	4
1.5.2 Scope of Contents	4
1.5.3 Scope of WK Actor	4
1.6 Significance of the Research	5
1.6.1 Alternative way of teaching and learning for Mathematics teacher	5
1.6.2 Enrich learning experience for Mathematics students	5
1.6.3 Preservation of WK	6
1.7 Summary	6
CHAPTER 2 : LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Wayang Kulit	7
2.3 Conceptual Model	9
2.4 Mathematics Subject	9
2.5 Multimedia	10
2.6 Summary	10

CHAPTER 3 : RESEARCH METHODOLOGY	xviii
3.1 Introduction	xviii
3.2 Phase 1: Conceptual Model Design	xix
3.3 Phase 2: Design and Development	22
3.3.1 Hardware and Software Requirements	22
3.3.2 Electronic screen layout	22
3.4 Phase 3: Evaluation	23
3.5 Summary	24
CHAPTER 4 : DESIGN AND DEVELOPMENT	18
4.1 Introduction	18
4.2 Construction of Conceptual Model	18
4.2.1 Components of Conceptual Model	19
4.3 Development of DWK Prototype	19
4.3.1 Integration of components in DWK	20
4.4 Summary	28
CHAPTER 5 : USER EVALUATION AND RESULT	29
5.1 Introduction	29
5.2 The Result of User Evaluation	29
5.2.1 The results of data analysis for Usability	30
5.2.2 The Result of data analysis for Satisfaction	38
5.3 Summary	40
CHAPTER 6 : CONCLUSION	48
6.1 Introduction	48
6.2 Research Finding	48
6.3 Research Limitation	49
6.4 Recommendation for Future Works	50
6.5 Summary	50
REFERENCES	51
APPENDIX A	53
APPENDIX B	60

APPENDICES

- Appendix A Print screen of prototyping
- Appendix B Questionnaire

LIST OF TABLES

Table 3.1: Hardware and Software	15
Table 3.2: Likert Scale Classification	16
Table 5.1: Data analysis for Usability	23
Table 5.2: Frequency of Item 1	24
Table 5.3: Frequency of Item 2	25
Table 5.4: Frequency of Item 3	26
Table 5.5: Frequency of Item 4	27
Table 5.6: Frequency of Item 5	28
Table 5.7: Frequency of Item 6	29
Table 5.8: Frequency of Item 7	30
Table 5.9: Data analysis for Satisfaction	31
Table 5.10: Frequency of Item 8	32
Table 5.11: Frequency of Item 9	33
Table 5.12: Frequency of Item 10	34
Table 5.13: Frequency of Item 11	35
Table 5.14: Frequency of Item 12	36
Table 5.15: Frequency of Item 13	37
Table 5.14: Frequency of Item 14	38
Table 5.15: Frequency of Item 15	39

LIST OF FIGURES

Figure 3.1: Framework of the study	11
Figure 3.2: Conceptual Model	13-14
Figure 5.1: Percentage of Item 1	24
Figure 5.2: Percentage of Item 2	25
Figure 5.3: Percentage of Item 3	26
Figure 5.4: Percentage of Item 4	27
Figure 5.5: Percentage of Item 5	28
Figure 5.6: Percentage of Item 6	29
Figure 5.7: Percentage of Item 7	30
Figure 5.8: Percentage of Item 8	32
Figure 5.9: Percentage of Item 9	33
Figure 5.10: Percentage of Item 10	34
Figure 5.11: Percentage of Item 11	35
Figure 5.12: Percentage of Item 12	36
Figure 5.13: Percentage of Item 13	37
Figure 5.14: Percentage of Item 14	38
Figure 5.15: Percentage of Item 15	39

LIST OF ABBREVIATIONS

SKHAR	Sekolah Kebangsaan Haji Abdul Rahman
WK	Wayang Kulit
DWK	Digital Wayang Kulit

CHAPTER 1

INTRODUCTION

1.1 Introduction

Mathematics is an important subject for science and technological careers (Nor, A., M., Z., et al., 2009). Primary School Mathematics Curriculum aims to develop pupils' understanding of the concept of numbers and basic computing skills (Ministry of Education, 2001).

According to Zurina, M. (2005), multimedia technology has reform the current education system and is successfully implemented for its advantages and capabilities. In this modern era of information and technology, the traditional teaching and learning although still applicable could be enhanced by using the modern tools such as multimedia to improve students' understanding and appreciation of mathematics education in school.

Pupils are seen to be more motivated when using multimedia. Teachers have stated that multimedia enables pupils to work at a different pace, and some packages can be tailored to the pupils' needs. Teachers have also suggested that they regard pupils as learning co-operatively when multimedia is used (Slack, 1999).

According to Wahju, W. (2011), the function of 'Wayang' can be compared to a picture book. It enables the children to adopt many distinct characters and to act out moods, conflicts and imaginative fiction in a safe environment. Moreover, there is a close relation between imagination and the ability of thinking.

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