

Universiti Teknologi MARA Malaysia

**Usability Testing Phase Diagrams for
Doing Usability Testing with Children**

Nornadia Binti Sidi

Thesis submitted in fulfillment of the requirements for
**Bachelor of Science (Hons.) Information System
Engineering**

Faculty of Computer and Mathematical Sciences

NOVEMBER 2010

ACKNOWLEDGMENT

Praise be to Allah SWT Most Gracious, Most Beneficent

First and foremost, Praise to Allah for His guidance and blessing for giving me the strength and perseverance to complete this project. Without His blessing, this project could not have been accomplished.

A special thank and appreciation to my thesis supervisor; Dr. Fariza Hanis Abd. Razak, for her encouragement, motivation, advice, guidance and ideas, all the way through the progress of this research. My gratitude also goes to both of my thesis coordinator, Assoc. Prof Rashidah Rawi and Mrs Wan Nor Amalina Wan Hariri for their valuable comments, suggestions and criticisms for the completion of this project.

Special thanks to the preschool children and teacher of Tadika Si Kecik Pintar, Seksyen 4, Shah Alam. Your participation and cooperation is very rich and useful for the findings of this project.

My greatest appreciation thanks to my beloved family who have give me unquestioned, unconditional love and support in every situation throughout this project.

Last but not least, my special thank to all my friends who contributed directly or indirectly to this project especially to Pn. Hanayanti Hafit. Thank you so much for your support and assistance in getting me through this project. May God bless all of you.

Thank you.

ABSTRACT

This thesis focuses on process flow for conducting usability testing with children. The process flows have been depicted into several flowcharts in which each shows different phases of usability testing activities. The first objective of this research is to identify the guidelines of usability testing. The second objective is to adopt the identified guidelines for usability testing with preschool children. Last but not least, the third objective is to produce usability testing phase diagrams of usability testing with preschool children. For achieving the deliverables of these three objectives, one must follow the research methodology. There are four phases which are the problem identification and planning phase, information gathering phase, analysis information and implementation phase and lastly result representation phase. Throughout this research, the finding that has been produced is several flowcharts consist of four phases which are before test phase, introduction phase, during phase and after test phase. By constructing the usability testing phase diagrams contribute to the usability testers to visualize the flow process for conducting the usability testing with children.

TABLE OF CONTENT

APPROVAL.....	ii
DECLARATION.....	Hi
DEDICATION.....	iv
ACKNOWLEDGMENT.....	v
ABSTRACT.....	vi
TABLE OF CONTENT.....	vii
LIST OF FIGURES.....	x
LIST OF TABLES.....	xii

CHAPTER 1: INTRODUCTION

1.1	Research Background.....	1
1.2	Problem Statement.....	2
1.3	Aim of the research.....	3
1.4	Research Objectives.....	3
1.5	Research Scope.....	3
1.6	Significance of the research.....	4

CHAPTER 2: LITERATURE.REVBEW

2.1	Definition of Usability.....	5
2.2	Usability Testing.....	6
2.2.1	Usability Testing Techniques.....	7
2.2.2	Advantages and Disadvantages of Usability Testing Techniques.....	10
2.3	Involvement of Children in Usability Testing.....	12
2.4	Usability Testing Guidelines.....	14
2.4.1	Literature from Marion Hansen (1991).....	14
2.4.2	Literature from Hanna, Ridsen and Alexander (1997).....	15

2.4.3 Literature from Afke Donker and Pieter Reitsme (2004)	16
2.4.4 Literature from Wang Danli, Jie Li and Guozhong Dai (2008)	17
2.4.5 Literature from Edward H. and Benedyk R (2007)	18
2.4.6 Literature from Ester B. et al. (2004)	20
2.4.7 Literature from Benedikte S., Jansen J., Skov M. (2005)	21
2.4.8 Literature from Stone D, JarrettC, Wooddroffe M., and Minocha S.(2005)	23
2.5 Educational Game Courseware	24
2.5.1 Designing for Fun	25
2.6. Phases	30
2.6.1 Waterfall Model	30
2.6.2 V- Model Diagram	31
2.6.3 Iterative Life Cycle Model	32
2.7 Symbols and Description	33
2.8 Summary	34

CHAPTER 3 : RESEARCH APPROACH AND METHODOLOGY

3.1 Introduction	35
3.2 Problem Identification and Planning	37
3.2.1 Identify Problem Statement, Research Objectives, Significance of the research, Scope, Aim of the research	37
3.2.2 Plan Schedule	38
3.3 Information Gathering	38
3.3.1 Primary data	39
3.3.2 Secondary data	39
3.4 Analysis Information and Implementation	40
3.5 Results Representation	40