UNIVERSITI TEKNOLOGI MARA

Specification for Designing Pediatric Ward based on Sensory Interaction

FARAH HAZWANI BT ABD RAHIM

Bachelor of Science (Hons) Information Systems Engineering Faculty of Computer and Mathematical Sciences

January 2012

ACKNOWLEDGEMENT

"In the name of ALLAH S.W.T. the Most Gracious and Most Merciful"

Alhamdulillah. All praises to Allah SWT, whom with His willing giving me the opportunity to complete this Final Year Project in time which is title Specification for Designing Pediatric Ward Based on Sensory Interaction. This final year project report was prepared for Faculty of Computer and Mathematical sciences, (FSKM), UiTM, Shah Alam, basically for student in final year to complete the undergraduate program that leads to the degree of Bachelor of Information Systems Engineering.

Firstly, I would like to express my biggest thanks to my CSP 650 lecturers, Mrs. Wan Nor Amalina Wan Hariri and Assoc. Prof. Rashidah Rawi as thesis coordinator of final year project whose help, suggest and encourage me in finishing this research project report.

It is an honor for me to express my special thanks to my helpful supervisor, Dr. Wan Adilah Wan Adnan who had patiently guided and gave brilliant ideas to me during two semester's session. The supervision and support that she gave truly help the progression and smoothness of the internship program.

My great appreciation also go to my biggest supporters that are my parents, Abd Rahim Ahmad and Puan Zaiton Hussin, family, and others for their cooperation, encouragement, constructive suggestion and full of support for the report completion, from the beginning till the end.

Last but least, I would like to show my sincere gratitude to all of my friends and everyone, those have been contributed by supporting my work and help myself during the final year project progress till it is fully completed.

ABSTRACT

Health care is one of the most personal and important things in our life. Design of built environment can enhance the quality of healthcare consistently make to the experience of health and healing. Sensory of sight, sound, smell and touch could provide positive support for patient in their healing. Despite this, the elements of these sensory interactions are, at present, still lacking and not emphasis at pediatric ward. Thus, to design on sensory interaction which could help creating healing environment in healing process for children at pediatric ward, firstly healing environmental features that can help patient in their healing process will be identified. Secondly, determination of sensory interaction design which could help in healing process. At the end of this finding, the design for pediatric ward with healing significantly are the reduction of stress for patients, care givers and patient's families while they at the hospital. Furthermore, patient will feels more comfortable during their treatment and help to shorten the length of treatment.

TABLE CONTENTS

CONTENT

PAGE

ii
111
iv
v
vi
ix
х

CHAPTER ONE: INTRODUCTION

1.2Problem Statement31.3Research Aim41.4Objectives of Project41.5Stakeholders41.6Šcope of Project51.7Significant of Project51.8Research Question51.9Research Design61.10Organizational of the Chapter71.11Summary of the Chapter9	1.1	Research Background	1
1.4Objectives of Project41.5Stakeholders41.6Scope of Project51.7Significant of Project51.8Research Question51.9Research Design61.10Organizational of the Chapter7	1.2	Problem Statement	3
1.5Stakeholders41.6Scope of Project51.7Significant of Project51.8Research Question51.9Research Design61.10Organizational of the Chapter7	1.3	Research Aim	4
1.6Scope of Project51.7Significant of Project51.8Research Question51.9Research Design61.10Organizational of the Chapter7	1.4	Objectives of Project	4
1.7Significant of Project51.8Research Question51.9Research Design61.10Organizational of the Chapter7	1.5	Stakeholders	4
1.8Research Question51.9Research Design61.10Organizational of the Chapter7	1.6	Scope of Project	5
1.9Research Design61.10Organizational of the Chapter7	1.7	Significant of Project	5
1.10 Organizational of the Chapter 7	1.8	Research Question	5
5 1	1.9	Research Design	6
1.11Summary of the Chapter9	1.10	Organizational of the Chapter	7
	1.11	Summary of the Chapter	9

CHAPTER TWO: LITERATURE REVIEW

2.1	Pediatric	10
	2.1.1 Pediatric Definition	10
2.2	Healing Environment	10
	2.2.1 What is healing environment?	10

	2.2.2	Why hea	aling environment is important?	11
	2.2.3	How healing environment can contribute		
		to patier	it recovery?	12
2.3	Sensor	ry		12
	2.3.1	What is	sensory?	12
		2.3.1.1	Vision (sight) Sensory	12
		2.3.1.2	Auditory (hearing) Sensory	20
		2.3.1.3	Tactile (touch) Sensory	23
	2.3.2	Why ser	sory is important?	24
2.4	Senso	ry Interaction Design		
2.5	Affect	ffective Computing		
2.6	Summary of the Chapter			34

CHAPTER 3: RESEARCH APPROACH AND METHODOLOGY

3.1	Problem Identification	37
3.2	Knowledge Acquisition	40
3.3	Analysis and Findings	40
3.4	Design	41
3.5	Summary of the Chapter	42

CHAPTER 4: ANALYSIS AND FINDINGS

4.1	Objec	tive 1: To identify healing environmental	
	Featu	res that can help in their healing process	43
4.2	Objec	tive 2: To determine sensory interaction design	
	which	could help in healing process	50
4.3	Objec	tive 3: To apply affective computing activities	
	in des	igning pediatric ward and demonstrate the design	
	for pe	diatric ward with healing environment based on	
	sensor	y interaction	67
	4.3.1	Applying affective computing activities in	
		designing pediatric ward	67