BORANG PENGESAHAN STATUS TESIS^

JUDUL: HAJ EDU SYSTEM: A MULTIMEDIA APPLICATION FOR ADULT LEARNERS

SESI PENGAJIAN: 2005/2006

Saya KHALID ASWAD BIN ABDUL WAHAB

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

1. Tesis adalah hakmilik Kolej Universiti Teknikal Kebangsaan Malaysia.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. ** 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 541, Jalan 5, Taman Ampang Utama, 68000, Ampang, Selangor Darul Ehsan

MOHD HAFIZ B. ZAKARIA
Nama Penyelia

Tarikh : 24 APRIL 2006

Tarikh : 24 APRIL 2006

CATATAN: ** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.
^ Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

HAJ EDU SYSTEM:
A MULTIMEDIA APPLICATION FOR ADULT LEARNERS

KHALID ASWAD BIN ABDUL WAHAB

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

FACULTY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2006

DECLARATION

I hereby declare that this project report entitled

HAJ EDU SYSTEM:
A MULTIMEDIA APPLICATION FOR ADULT LEARNERS

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

STUDENT : _____ Date : 27 APRIL 2006
(KHALID ASWAD B. ABDUL WAHAB)

SUPERVISOR : _____ Date : 27 APRIL 2006
(MOHD HAFIZ B. ZAKARIA)

DEDICATIONS.

Dedicated specially to my parents, Abdul Wahab Adam and Rakmani Abdul Rahman

ACKNOWLEDGEMENTS

Alhamdulillah, praise to ALLAH s.w.t, I am very pleased and grateful of being able to finish my final project. I'm taking this opportunity to give my gratitude to a couple of parties for their help. First and foremost, I would like to thank my family especially my parents, En. Abdul Wahab b. Adam and Puan Rakmani bt. Abd. Rahman for the support, love and encouragement that they provided me through my entire life and in particular for this project as I would not have finished this thesis. I would like to express my gratitude to my supervisor, En. Mohd Hafiz b. Zakaria, whose expertise, understanding and patience added considerably to my success of completing this thesis. I appreciate his vast knowledge and skill in many areas and his assistance in writing and completing this report. A very special thanks goes out to Puan Rusnida Romly for her advice during my final project presentation the previous semester. I must also acknowledge En. Shahrizan b. Shaarani, ex-Head Department of Media Interactive for his suggestions and ideas. I would also like to thank my friends for their help and support. Although many people have contributed to this project and have helped to complete it, I take sole responsibility for any errors. Wassalam.

ABSTRACT

This paper concentrates on the needs of those seniors aged from 50 years old and above who are not computer literate. It's a study on how to attract elderly user to use the e-learning method in order to learn knowledge in performing the haj rather than learning it through the traditional method. This system only focuses on the tawaf ritual. If the concept works, then it can be expanded to other remaining ritual in the haj. There are a lot of considerations that needs to be taken care of so that this e-learning system will be able to fulfill its main objective that is to enable the elderly user able to use the computer without facing any difficulties. Along the way, this project will describe how all of the multimedia elements can be effectively utilized by contextualizing them and then create a suitable e-learning system for the elderly user. ADDIE is the model that will be use to develop this project. Even tough the target user is those aged 50 years old and above, it does not mean that normal cannot use it.

ABSTRAK

Projek ini akan menumpukan perhatian terhadap warga tua yang berumur 50 tahun ke atas yang buta ilmu komputer. Ia adalah merupakan sebuah kajian bagaimana untuk menarik warga emas untuk menggunakan kaedah e-learning bagi mempelajari ilmu mengenai cara-cara untuk melaksanakan ibadat haji tanpa perlu mempelajarinya menerusi kaedah tradisonal. Sistem ini hanya memfokuskan kepada rukun ibadat tawaf sahaja. Sekiranya konsep yang ingin diperkenalkan dalam sistem ini berjaya, maka ia boleh dipecahkan kepada baki rukun-rukun lain yang terdapat dapat ibadat haji. Terdapat banyak perkara yang perlu diambil kira bagi memastikan yang sistem e-learning ini dapat memenuhi objektif utamanya iaitu bagi membolehkan warga emas untuk menggunakan computer tanpa menghadapi banyak masalah. Disamping itu, projek ini akan turut menerangkan mengenai bagaimana elemen multimedia boleh digunakan secara efektif dan kemudiannya menghasilkan sebuah sistem pembelajaran e-learning yang sesuai bagi pegguna warga emas. ADDIE adalah merupakan model yang digunakan untuk membangunkan projek ini. Walaupun umur pengguna sasaran adalah mereka yang berumur 50 tahun dan ke atas, namun ini tidak bermakna pengguna normal tidak boleh menggunakannya.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREAVIATIONS

ACRONYMS		DEFINITION
CD	:	Compact Disc
CRT	:	Cathode Ray Tube
DVD	:	Digital Versatile Disc
Dur	:	Duration
Est	:	Estimation
FTMK	:	Fakulti Teknologi Maklumat dan Komunikasi
GUI	:	Graphical User Interface
HCI	:	Human Computer Interaction
HFI	:	Human Factor International
ICT	:	Information & Communication Technology
IQ	:	Intelligent Quotient
IT	:	Information Technology
JPEG	:	Joint Photographic Experts Group
KUTKM	:	Kolej Universiti Teknikal Kebangsaan Malaysia
LTH	:	Lembaga Tabung Haji
MB	:	Megabyte
Min	:	Minute
OS	:	Operating System
PC	:	Personal Computer
PMA	:	Primary Mental Abilities
PNG	:	Portable Network Graphic

PSM	:	Projek Sarjana Muda
SME	:	Subject Matter Expert
TQ 1	:	Technical Question 1
TQ 2	:	Technical Question 2
TQ 3	:	Technical Question 3
TS 1	:	Test Subject 1
TS 2	:	Test Subject 2
USA	:	United States of America

LIST OF APPENDIX

CHAPTER I

INTRODUCTION

1.1 Project Background

The haj is compulsory to every Muslim that has fulfilled all the conditions required. This includes all whether they're young or old. In Malaysia, before they are allowed to go to fulfill the ritual, they must first attend a special course conducted by Lembaga Tabung Haji Malaysia. The course is to educate the pilgrims on matters such as how the haj is done, things to be done during their time at the holy land and many more. All of these courses are being conducted in the form of lecture and by the help of presentation software such as Microsoft Power Point.

In Malaysia, the majority of haj pilgrims are those with the age of 50 and above. They make a majority of about 65% from the total quota determine by the Saudi Arabia Government. This is a good chance to help the elderly citizens to learn how to perform the haj and at the same time to learn Information Technology (IT) as well. This will surely attract them to learn and use this system. The main focus of this system is to help the elderly citizen's haj pilgrims to learn and understand two kind of knowledge that is to learn about the haj and also to learn Information Technology. This system can also be use by others but the approach is mainly focusing on elderly pilgrims.

1.2 Problem Statement(s)

Elderly people are usually perceived as technophobic and slow to adapt to technological change (Ryan,Szechtman & Bodkin, 1992). This is just the perception and mentality that all human has. Besides that, it is also said that the majority of elderly has an aversion to or fear of computer use (Baldi, 1997). Why does this situation occur? Does the elderly should be left behind and not be given the chance to learn the latest computer technology? Of course the answer is no. According to Ogozalek (1991), existing research suggest that elders are capable and enthusiastic computer users. They want to learn but the facility and the opportunity is not on their side. A few years back, our former Prime Minister has launched the ICT policy. Among things included is every Malaysian, despite of age and race to join and learn ICT. Recently our Premier has once again emphasized on the needs of learning ICT. But most of the product based computers available today such as e-learning only provide learning facilities for teenagers and adults users.

There are a few factors why this situation occurs. First, the system developer did not find proper title that is suitable and could fulfill the needs of the elderly. Most of the e-learning products focus more on school children's syllabus such as science and mathematics. Second, the learning system designed and developed is not suitable according to the level of acceptance for the elderly. From a survey done by myself, subjects find that most of the e-learning system today has a lot of information and this will bored them.

The bombardment of information will eventually make them to loose interest to use the system. Cognitive theories dominate most of the current research on motivation to learn. The emphasis is placed on understanding what kind of perceptions or mental entities that motivates learners to learn and how individual learners differ from each other on these constructs. The major weaknesses of this theoretical perspective are that the developmental nature of motivation is often ignored and the effect of contextual

influences seldom explored. Furthermore, applying this research perspective to understanding the development of motivation among this group of elderly learners may be problematic.

Third, lack of system description and manual. Most of the elderly do not even know how to operate simple computer hardware such as the mouse and at the same time the developer expects them to use the e-learning that have been build. How can they be using a system that they themselves don't know how to operate at the first place. Fourth, the physical capability of people that age. Their reactions at times maybe slow, for example when double click the mouse. A unique technique is needed to help them overcome this problem. Lastly is the negative attitude pervasive to that age group towards computer technology (Czaja, 1988). The problem to be investigated in this study is the attitudes of the elderly adults towards learning computer. This e-learning system will try to analyze all the issues mentioned above and will then try to find the best solutions.

1.3 Objective

In order to ensure that the project run smoothly, objectives of the project must be stated clearly. This will not only ease the development of the system but also others who are involve in this project. Below are objectives for this project.

a) Develop a multimedia application system to be used by Lembaga Tabung Haji / Islamic Religious Department.

   At the end of the project, a new e-learning system equipped with multimedia concept will be build and this system would fulfill the needs of the elders to learn. The system will be build using multimedia technique. Multimedia

involves sound, graphic, text, video and animation. By combining all of them together and also with proper lecture notes, an interactive system can be build and then be use in order to get the user's attention to learn the subject.

b) Research on learning instruction for adult learner.

A research by going through a series of e-learning education technique will be done. In the end of this project, all of the research will be combined together to form a new education technique that is suitable for the senior citizens. This is to produce the best idea.

c) To understand better how the memory system of an elder functioned.

As the elderly are always deemed as slow especially when learning new things (in this case the computer), its better if we could first learn about them. To understand this better, a research on health and psychology perspective is needed. If this objective can be achieved, then it would be easier to build a learning system that is suitable for their needs.

d) Examine the impact receive by the elders while receiving new kind of information.

To see the reactions and examine the impact that the elderly will receive whenever they consume new kind of information such as learning computer software. A psychological aspect of research is needed to view this problem.

1.4 Scopes

To define the project scope, determine the project goals. The scale, component, cost material and report is different and it depends on the type of project built either for commercial, corporate, international, government, education and many more. Below are the scopes defined for this project.

a) To focus on the "tawaf" ritual.

Haj has a few rituals that must be completed. Among the rituals are "niat", "tawaf", throw stones at jamrah, wukuf at Arafah and many more. However on this education system, I will be only focusing on the "tawaf". The tawaf procedure alone can be divided into several more steps. The aim is to give description to the pilgrims on matters how to perform the "tawaf".

b) To develop an application for learners aged 50 years old and above

The target user that will be using this system is those considered as elderly citizen, age from 50 years old and above. It is important to know the users so that the system that will be built is suitable for them. At this time of age, sometime it's hard for them to learn something new like the computer as the elderly are usually perceived as technophobic and slow to adapt to technological change (Ryan, Szechtman & Bodkin, 1992). A research from the aspect of health and psychology will be done to see their capabilities in receiving input of information by the traditional way (listening to lectures) and the modern way (learning using computer).

c) The application is use to supplement for haj course.

The education level that is being focused on here is for those who are currently undergoing courses in performing the Haj. The courses are conducted at venues acknowledged by Lembaga Tabung Haji Malaysia.

1.5 Project Significance

Information Technology (IT) has contributed towards the greater independence of disabled and elderly people. But at the same time, developments in IT have changed society as a whole. A host of new products and services have become part of our everyday lives. However, only some of these developments are really benefiting the elderly people. Many of the IT based products today does not attract the elderly people to use it not because the limitations of the technology. It is because the products itself have not been designed to suit with the elderly mind. Therefore, they are often unsuitable for use by these groups of people.

There is a danger that IT will cause greater difficulties for the elderly and also disabled people, instead of the other way around. Personal service is rapidly being replaced by IT-based services such as automatic teller machines, voice response, traffic information and many more. Nearly all of these IT systems make considerable demands on users in terms of their ability to read and write, interpret information quickly and make decisions. This creates problems especially for these two groups.

Instead, in order to achieve a greater degree of participation for all, the new technology must be made more accessible and usable. It is possible to develop technology to make it possible for a blind person to surf the Internet without hindrance, for a deaf person to communicate over the telephone network using sign language, for a

person with severely impaired mobility to write and fax off a letter simply by dictating it into a computer, for an intellectually impaired person to plan their day with the aid of pictures and simplified instructions, or for elderly people to feel more secure in their homes thanks to good alarm system. Therefore there must be conscious efforts to increase accessibility to IT systems and to improve the relevant technical aids. This is a challenge for society that is to exploit the possibilities offered by IT to design more flexible systems and products. Companies have a responsibility to ensure that their products may be used by as many people as possible as this will also boost their markets. Society can encourage and to a certain extent, direct their efforts by means of financial support, legislation and establishing standards for public sector procurement.

As for this project, there are a lot of people that will taste the benefits. It is not only being use for personal use but also for the whole country. Two birds could be hit by using one stone. The user will not only be able to learn about the haj but at the same time capable of learning using computer. This e-learning system is being built as a new method of teaching the elderly pilgrims to learn Haj but they are still required to go on courses held by Lembaga Tabung Haji. Even though the scope for this project only focuses on the tawaf, but at least it could give a better picture for the pilgrims on the right way to perform it. If the project is proven successful, then the Lembaga Tabung Haji could expand this research and focus on all of the remaining rituals.

1.6 Expected Output

Several outputs are expected from this project. First, the level of acceptance from the elderly towards new information. This could be seen from the health and also psychology aspect. To see the impact and reaction they received when consuming knowledge such as using the computer and at the same time learn about the haj.