INTERACTIVE JAWI FOR DYSELXIA CHILDREN

MOHD RIDHWAN BIN NAGIB

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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JUDUL: INTERACTIVE JAWI FOR DYSLEXIA CHILDREN

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Tandatangan Penulis:
Alamat Tetap:No7 Jalan Mutiara Taman Mutiara Jalan Pokok Mangga 75250 Melaka
Tarikh: 30/6/2010

Tandatangan Penyelia:
(En Muhammad Haziq Lim Abdullah)
Tarikh: 30/6/2010

CATATAN: * Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)
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INTERACTIVE JAWI FOR DYSELXIA CHILDREN

MOHD RIDHWAN BIN NAGIB

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2010

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DECLARATION

I hereby declare that this project report entitled

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

STUDENT : _____ Date: 30/6/2010

(MOHD RIDHWAN NAGIB)

SUPERVISOR : _____ Date: 30/6/2010

(EN MUHAMMAD HAZIQ LIM ABDULLAH)

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DEDICATION

Specially dedicated to my beloved mother, sisters and family,

For my supervisor, En Muhammad Haziq Lim Abdullah,
(UTeM)

And lastly to my beloved friends and who have encouraged, guided and inspired me throughout my journey in education

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ABSTRACT

Interactive Jawi for Dyslexia Children is learning developed specifically for dyslexia student between 5-11 years old. As dyslexia children who have trouble in learning, progress treatment and therapy, especially in teaching and learning is needed to have a special approach in their learning. There are two modules in this Interactive Jawi that are Kenali Jawi and Aktiviti. This Interactive Jawi will teach the Jawi alphabet with the equivalent image display. With the use of graphics, animation, voice and sound effects in these applications, the interest and attention of children dyslexia to learn can be improved to make them as normal children to another. Introduction, Literature Review and Project Methodology, Analysis, Design, Implementation, Testing and Conclusion of the Project. Introductory part describes what is supposed that the application and purpose of this application. While in the literature review in the project methodology, it is associated with application specific characteristics of the application and the comparison approach, methodology and project needs. Part of analysis is a critical part of this report in which all information is collected and recorded properly. In addition, this section needs analysis. Part design is part of the structure of application development.

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ABSTRAK

Interaktif Jawi untuk Kanak-Kanak Dyslexia dibangunkan khusus untuk pelajar yang menghidap dyslexia dalam linkungan usia 5-11 tahun. Oleh kerana kanak-kanak dyslexia mempunyai masalah pembelajaran, kemajuan rawatan dan terapi terutamanya dalam proses pengajaran dan pembelajaran adalah amat diperlukan untuk membantu mereka. Terdapat dua modul pembelajaran ini terdiri daripada Kenali Jawi dan Aktiviti. Topik pengajaran ialah mengajar huruf jawi berserta paparan gambar yang bersamaan dengannya. Dengan penggunaan grafik, animasi, suara latar and kesan bunyi dalam aplikasi ini, minat dan perhatian kanak-kanak dyslexia untuk belajar dapat ditingkatkan untuk menjadikan mereka sebagai kanak-kanak normal yang lain. Secara khususnya, Pengenalan, Ulasan Kesusasteraan dan Projek Metodologi, Analisis, Reka Bentuk, Perlaksanaan, Pengujian dan Kesimpulan Projek. Bahagian pengenalan menjelaskan apa yang aplikasi ini sepatutunya ada dan tujuan aplikasi ini. Manakala dalam bahagian ulasan kesusateraan dalam projek metodologi, ia mengaitkan aplikasi yang mempunyai ciri-ciri tertentu dengan aplikasi dan perbandingannya, pendekatan metodologi dan keperluan projek. Bahagian analisis merupakan bahagian kritikal dalam laporan ini di mana semua informasi dikumpulkan dan direkodkan dengan teliti. Tambahan pula, bahagian ini turut menyentuh analisis keperluan. Bahagian reka bentuk ialah bahagian di mana struktur aplikasi dibangunkan.

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LIST OF ABBREVIATIONS

CD	-	Compact Disc
CD-ROM	-	Compact Disc Read-Only Memory
UTeM	-	Universiti Teknikal Malaysia Melaka
PC	-	Personal Computer

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CHAPTER I

INTRODUCTION

1.1 Project Background

At present, more advanced computers in education are being used. Computer provides unique advantages in teaching. Proceeds that are formed by a unique method of learning the computer and can emphasize practical learning, where teachers are trained to use various teaching tool, the E-Learning education, integrating technology into computer-based education curriculum in such a way to improve the learning process.

This E-Learning project will be developing is especially for dyslexia kids. This project will be focusing on how to attract dyslexia kids to learn more about Jawi alphabets. Furthermore, this project will include 2D animation to get a better interaction with dyslexia kids. Good animation and graphic will be enjoyable for dyslexia kids to learn more and more about this language. However, there is no E-Learning has been developed for children with dyslexia. The current approach is traditional teaching methods, manual books, and blackboard and flip card for activities in the classroom. The use of technology in educational process potentially can improve the learning process.

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1.2 Problem Statement

Dyslexia is derived from a combination of Greek words dys meaning difficulty and Lexis, which means language. In literally, dyslexia means difficulty in Language (Ott, 1997). Dyslexia Children not only has problems in reading, but also spelling, writing and some other aspects. Next, the definition for dyslexia added as a cognitive problem (Thomson, 1984). Furthermore that dyslexia is recognized not only affects concentration and memory of a child, but also management skills envy and sometimes also affect the ability of mathematics. Dyslexia caused by variations in the structure and function of the brain, it can be inherited from family members. However, the study still cannot ascertain the actual cause of the condition which causes more than 500,000. Statistic shows Malaysian children facing life challenges of dyslexia. Percentage of 10 percent to 15 percent of children is suffering from dyslexia at a minor level, while four per cent in the extreme. Although dyslexia a lifelong problem, children who have it can still be overcome with encouragement, support and appropriate assistance.

If kids has a dyslexia problems, immediately brought to the specialist or special education teachers. This is because if not contained at this early stage will protract problems into adulthood. "As a result, children receive a limited resource, self-confidence on the decline because of feeling ashamed and foolish, not wise in your studies and difficult to be a professional person," said Dr. Samsilah that tells dyslexic children cannot feel anxiety and fear.

Jawi alphabets are importance for our Muslim people. Sometimes other people from other region also interested about Jawi alphabets. We need to educate our dyslexia kids about Jawi alphabets from the early stages. So it will be much easier for them to understand and give much interested to continue the study about this language. To overcome this problem, there is a solution that is to make E-Learning Jawi for Dyslexia Kids to give an opportunity to our dyslexia kids to learn more about this language. E-Learning Jawi for Dyslexia Kids is a interactive learning, so that kids can enjoy the learning and participate more deeply. In this E-Learning Arabic language, it includes many promising section that couldn't make

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dyslexia kids feel bored so easily. The sections that will be learn alphabets Jawi and some game for kids to have fun with learn.

1.3 The project objective are:

i. **To synthesize and evaluate Jawi Learning approach among children in dyslexia**

Children with dyslexia have has problems in reading, but also spelling, writing and some other aspects. This E-Learning will give some opportunity to dyslexia children to learn more about Jawi .

ii. **To identify potential approach to learn Jawi among children with dyslexia**

Techniques used to help dyslexia students to improve basic skills or knowledge by providing a different learning scenario.

iii. **To develop a potential prototype for learn Jawi among children in dyslexia for effectiveness in learning Jawi**

This courseware becomes an alternative way for dyslexia children to learn in and practice inside or outside the classroom to replace the basic learning treatment methods.

1.4 Scope

My Interactive Jawi for the Dyslexia is an educational learning tool targeted for pre-school schools. It can be used for dyslexia children in the classroom. If not, it can also be used as a tool to help teachers in the learning process to teach dyslexia

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children. The content of this prototype is integrated with Malay Language component. It use of vocabulary and word structure provides a simple and easy. Enhanced learning with a multimedia CD-ROM that can increase motivation, improve reading skills and language. This attractive computer application was an ideal way to deliver content to children with dyslexia because these children are affects concentration and memory of a child, but also management skills envy and sometimes also affect the ability of mathematics.

1.5 Project Significance

The educational courseware prototype will benefit the children who suffer from dyslexia in pre-school. The aim is to motivate children to learn about dyslexia and raise awareness about the Jawi among them. Hopes it can help dyslexia children to gain an understanding. The prototype is used to teach dyslexia children learn Jawi alphabets. It can directly control diversifies their language. Each letter will be an associate with a picture, so that children can understand easily.

1.6 Conclusion

This chapter is the introduction of "Interactive Jawi E-Learning for Dyslexia Children". It illustrates and explains the project background, problems of statements, objectives, scope, project significance and expected output. This chapter determines the overall understanding of the project and importance of it. The application has an interesting interactivity which children with dyslexia can easily understand the contents in order to improve their learning and concentration. Next, the literature review of the development process will be explained.

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CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter will discuss about the literature review for this Interactive Jawi prototype. Literature reviews is the level where all search such as searching, collecting and analyzing what has been published by researchers. All the researches can be resolved through the relevant resources such as books, journals, technical reports, conference precede, website and others.

The purpose of the literature review is to obtain knowledge and ideas that have been set on the topic and to find out what the advantages and disadvantages. Therefore, this chapter will be explained how to develop and integrate the study of Interactive Jawi prototype for dyslexia children. A brief review of the characteristics of children dyslexia and learning difficulties will be described. Research that has been done in developing in this project involves the study of theories learning, teaching techniques, and approaches in helping dyslexia children learn to use education Interactive Jawi.

2.1.1 Introduction of Dyslexia

Developmental dyslexia is a condition related to poor reading. Children with dyslexia have difficulty learning to read due to one or more information processing problems. Many but not all children with dyslexia have difficulty with reversals of numbers, letters or words. New research points the way to specific methods of

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instructions that can help anyone learn to read well no matter what the underlying problem may be. Following the links will provide interesting new information as well as extremely effective solutions for all types of reading problems including developmental dyslexia.

Children may have dyslexia or a learning disability if they have one or more of the following symptoms:

i. Letter or word reversals when reading. (Such as was/saw, b/d, p/q).
ii. Letter or word reversals when writing.
iii. Difficulty repeating what is said to them.
iv. Poor handwriting or printing ability.
v. Poor drawing ability.
vi. Reversing letters or words when spelling words that are presented orally.
vii. Difficulty comprehending written or spoken directions.
viii. Difficulty with right - left directionality.
ix. Difficulty understanding or remembering what is said to them.
x. Difficulty understanding or remembering what they have just read.
xi. Difficulty putting their thoughts on paper.

Children with dyslexia do not exhibit these symptoms due to poor vision or hearing but because of brain dysfunction. The eyes and ears are working properly but the lower centers of the brain scramble the images or sounds before they reach the higher (more intelligent) centers of the brain. This causes confusion as well as frustration for the learner.

The main reasons for reading problems are:

i. Ineffective reading instruction
ii. Auditory perception difficulties
iii. Visual perception difficulties
iv. Language processing difficulties

Reading and writing is simply "talking on paper." Children learn to talk by imitating sounds and then combining the sounds to form words. The brain is

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