

DYSLEXIC QUEST APPLICATION

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DYSLEXIC QUEST APPLICATION

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This report is submitted in partial fulfillment of the requirements for the
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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.

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DEDICATION

To my beloved family, thank you for giving me a support starting from beginning until now.

ACKNOWLEDGMENTS

In the name of Allah the Almighty and most Merciful.

Alhamdulillah, all praises to Him who gives me the strength and patience in completing this project successfully. I would like to take this opportunity to thank my supervisor, Miss Intan Ermahani for her guidance and supports that was given to me during the completion cycle of this report and the project.

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ABSTRACT

Dyslexic Quest Application is a mobile application that is developed for learning tools for children with dyslexic. Dyslexic Quest use the technology for making a learning tools or teaching aids more easily and faster compare to manual methods that are using now because it is easily to use and carry to anywhere. Target user for this application is children with dyslexia between five to eight years old, tutor and parents to monitor the children to use the application. Children with dyslexia able to learn basic alphabets and words with this application also get a some exercise to practice what have their learn with the application. The application can be downloaded in tab or any android phone. Using RAD (Rapid Application Development) as methodology, this application is develop using Adobe Flash CS6 for software and ActionScript 3.0 as language.

ABSTRAK

Aplikasi Dyslexic Quest adalah aplikasi telefon yang dibangunkan sebagai alatan pembelajaran kepada kanak-kanak yang mengalami disleksia. Dyslexic Quest menggunakan teknologi terbaru sebagai alatan pembelajaran di mana menjadi lebih mudah dan mudah untuk dibawa serta digunakan kemana sahaja berbanding dengan sistem manual yang digunakan sekarang. Pengguna aplikasi ini ialah kanak-kanak yang mengalami disleksia, pengajar serta ibu bapa bagi tunjuk ajar cara penggunaan aplikasi ini. Kanak-kanak yang mengalami disleksia berpeluang belajar asas huruf dan perkataan daripada aplikasi ini serta akan diberi sedikit aktiviti untuk mengulangkaji apa yang sudah mereka belajar. Aplikasi ini boleh dimuat turun pada setiap tab atau telefon pintar yang mempunyai android. Menggunakan metodologi RAD, aplikasi ini dibangunkan menggunakan Adobe Flash CS6 dan menggunakan bahasa pengaturcaraan ActionScript 3.0.

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CHAPTER I

INTRODUCTION

1.1 Overview

With the rapid development of technology and internet access is everywhere, mobile application is surely is most favorable among other things. As technology evolves, many parents with special needs children are finding some support with devices such as for parents who have dyslexia kid's. Dyslexic Quest is a application that can help and support kids with spelling difficulties and dyslexia. This application allows user to spell the words and know the alphabets for making it easy to quickly find the correct spelling of a word.

The scope of dyslexia is a lot more than just reversing letters. Kids with dyslexia can suffer at school; feel excluded simply because they need to learn in a different way. Quite often in the past, dyslexia was not diagnosed and many kids affected by it were often qualified as slow learners, or even trouble.

1.2 Problem Statement

i. Reading difficulty

Dyslexia kids have a problem to read well because of difficulty learning the alphabet. Sometime they cannot recognized the correct alphabet to apply in their readings. When reading, kids with dyslexia can misread similar looking words, also get confusion of direction left and right, before and after of words.

ii. Poor in speeling

Kids with dyslexia, very poor in spelling because they will occasionally reverse letters as they learn, mix up the order of letter and get some letters round the wrong way such as using upper case and lower case B,b and D,d.

iii. Some parents have lack of awareness and knowledge about dyslexia

Since dyslexia is not a disease for everyone, people or parents just look at it as mild problem. When happening to them or their child, they do not know what exactly happened and what should they need to do next because lack of knowledge about that.

1.3 Objective

The objective of this project are:

- i. To guide kids in dyslexia to read correctly.
- ii. To guide kids in dyslexia to learn an alphabet and spell its correctly.
- iii. To give recommendation to people whether they have signs of dyslexia or not based on quiz given before refer to expert specialist.
- iv. Find out ways parents can help at home and provide information about dyslexia.

1.4 Scope

This section will describe about the target users and modules in this project. Target users are specific group of individuals who will use this product after it is implemented. Modules are the separable component, such as assessments, levels or types that is interchangeable with other components in this project.

1.4.1 User

This project are mainly focusing on children between 5 to 8 years old. This project also focusing on parents who have dyslexia child for gain their knowledge.

1.4.2 Module

This project module is divided for 2, there are for parents and dyslexia user.

A. Parents

For security purpose, before entering this module apps will be ask a password or any keys for authentication.

a) What is dyslexia?

Information what is dyslexia and how to find out based on symptom they act daily especially in reading and writing ability.

b) Tips for parents

Guideline for guardians especially parents, how to help dyslexia person. What should they do, what should not and etc.

c) Tips for school

Find out where is school nearby that provide for dyslexia kids.

B. Dyslexia User

a) Quiz

This module will give user a questions to identify either they show signs of dyslexia or not. There will be categorized based on marks they achieve during answering all the given questions.

b) Alphabets

This module will give the users the foundation of recognizing and writing letters of the alphabet. First, they will be introduced to a letter and the shape of the letter. Then the user can click on the letters on right hand side to start a 2D animation of letter writing and dashes lines of the letter will be provided on screen as guidance.

c) Words

This module will teach the dyslexic how to read and spell simple words. The teaching approach in this module uses visual cues within the words to help the child recognize the word and remember how to spell it.

1.5 Expected Output

This system will be executed in accordance with the objectives set and can be used after everything is complete according to what has been established.

1.6 Conclusion

In a nutshell, this project is developed to assist individuals to clarify whether they are potentially dyslexic. Mobile applications will be used as platform to implement the screening test. Project background, problem statement, objectives, scope and expected output are included in this chapter to show an overview of the project.-

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter will discuss about the literature review for this Dyslexic Quest application. Literature review is the level where all search such as searching,

collecting and analyzing what has been published by researchers. All the researchers can be resolved through the relevant resources such as books, journals, technical reports, websites 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 Dyslexic Quest application for dyslexia children. A brief review of 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 Dyslexic Quest.

2.2 Facts and Findings

2.2.1 Introduction of Dyslexia

Development dyslexia is a condition related to difficulty of reading. Children have a dyslexia face a difficulty of reading to due to one or more information processing problems. Many but not all children with dyslexia have difficulty with reversals of numbers, letters and words. New research points the way to specific methods of 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 reading problems including development 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. (eg: 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 and remembering what is said to them.
- x. Difficulty understanding and 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 and 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.

2.2.2 Existing System

2.2.2.1 Why Dyslexic Quest

In Malaysia, it is estimated that in 1 in every 20 students is dyslexic which means that each classroom in every primary school has at least 1 or 2 potential dyslexic (Kuala Lumpur Dyslexia Association, 2006). This is supported by the figures from the Ministry of Education that there are approximately 315,000 primary school children in Malaysia are potentially dyslexic. The product is not only

benefits dyslexic children but also children with other types of learning difficulties such as autism and slow learner. Table 1 shows the comparison between Dyslexic Quest and other similar products in the market.

Dyslexic Quest	Other Products in Market
The technique adopted in this product offers flexibility for parents in monitoring the children learning progress.	The technique was adopted in most product and in-flexible for learning progress.
Dyslexic Quest is suitable for main stream children and those having learning difficulties.	Only suitable for those not having learning difficulties children.

2.2.3 Technique

It is obvious that there is no a single method to teach dyslexic children to read. Thus, a combination of techniques and a variety of technology will be integrated into a range of instructional methods. Hence, this courseware will be designed to teach the dyslexics in a way they can learn and extend their abilities.

2.2.3.1 Multisensory Teaching

Multisensory teaching is simultaneously visual, auditory, and kinesthetically to enhance memory and learning. Links are consistently made between the visual (what we see), auditory (what we hear), and kinesthetic-tactile (what we feel) pathways in learning to read and spell. Simply put, the multisensory teaching

instruction uses multiple media that allows dyslexics to develop links between what a word looks like, sounds like and means. Multisensory teaching also employs all pathways of learning at the same time, seeing, hearing touching, writing and speaking. Roughly multisensory approach is dyslexics may be unaware of the role sounds play in words. They may also have difficulty rhyming words, blending sound to make words or segmenting words into sounds. Being taught using the multisensory approach, dyslexics will be trained in phonemic awareness that uses direct, explicit teaching of letter-sound relationships, syllable patterns, and meaning word parts.

2.2.3.2 Picture Thinking

People with dyslexia tend to think in pictures rather than words. Dyslexic Quest applications will enable dyslexic children to learn to read using pictures-thinking model. Children will click on pictures and listen to the pronunciation of the word that describes the picture. At the same time, there will be color coded text to differentiate the syllable division in the word. The text will be animated as it is pronounced in the voice over. Consequently, the reader first figures out the story content from the picture. Then, the reader makes the transition to the printed word and the sound the word makes. Once the reader understands the material, words become more meaningful.

2.3 Project Methodology

In this Dyslexic Quest, the suitable methodology used is Rapid Application Development (RAD). The RAD was popular model that are used to develop a small business project. According to Wikipedia, Rapid application development (RAD) is a software development methodology that uses minimal planning in favor of rapid prototyping. The "planning" of software developed using RAD is interleaved with writing the software itself. The lack of extensive pre-planning generally allows software to be written much faster, and makes it easier to change requirements.