ISLAMIC BEHAVIORAL TREATMENT GAME FOR ADHD KIDS (AdabI)

NOR SYAFIQAH IZAZI BINTI JAMIL

Bachelor of Computer Science
(Graphics and Multimedia)

UNIVERSITI MALAYSIA PAHANG

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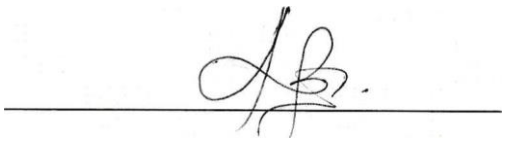
I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Science Computer (Graphics and Multimedia with honors) in bachelor.



(Supervisor's Signature)

Full Name : MISS NORANIZA BINTI SAMAT
Position: SUPERVISOR
Date : 31 DECEMBER 2018

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(Student's Signature)

Full Name : NOR SYAFIQAH IZAZI BINTI JAMIL

ID Number : CD15034

Date : 31 DECEMBER 2018

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(AdabI)

NOR SYAFIQAH IZAZI BINTI JAMIL

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ABSTRAK

Gangguan hiperaktiviti defisit perhatian (ADHD) adalah keadaan perubatan di mana orang yang mempunyai jenis penyakit ini tidak dapat mengawal momentum dan hiperaktif mereka. Kanak - kanak ADHD mempunyai tiga jenis ADHD iaitu yang tidak peduli, hiperaktif dan impulsif. Penyakit ADHD boleh dirawat dengan asas rawatan yang hanya memberi tumpuan kepada perubahan tingkah laku. Masalah yang paling biasa adalah tidak ada permainan khusus untuk kanak – kanak ADHD dengan kandungan Islam. Selain itu, masalah lain adalah permainan sedia ada mengandungi isi kandungan yang tidak sesuai dengan kanak – kanak ADHD dan tidak ada permainan ADHD yang dibuat khusus dalam Bahasa Melayu. Oleh itu, permainan ini akan mendidik mereka beberapa nilai moral Islam yang boleh mereka praktikkan dan belajar dalam kehidupan seharian mereka dan pada masa yang sama membantu mereka dalam mengawal tingkah laku mereka di mana permainan ini akan menarik perhatian mereka. Matlamat projek ini adalah untuk mewujudkan permainan rawatan tingkah laku 2 - Dimensi Islam untuk kanak-kanak ADHD di mana untuk mengawal tingkah laku dan adab. Untuk mencapai matlamat ini, tingkah laku ADHD kanak-kanak itu diperhatikan dan belajar aplikasi permainan yang berkenaan, mereka bentuk dan membangunkan permainan tingkah laku rawatan 2 dimensi mudah alih untuk kanak – kanak ADHD dan menilai keberkesanan permainan AdabI terhadap kanak – kanak ADHD. Kanak-kanak ADHD sasaran umur adalah di antara 5 hingga 12 tahun. Pengguna sasaran lain adalah guru dan ibu bapa. Permainan ini akan dibangunkan oleh perisian aplikasi Unity dan dalam Bahasa Malaysia. Dalam projek ini, Pembangunan Aplikasi Rapid (RAD) adalah metodologi yang sesuai untuk digunakan kerana ia meningkatkan kelajuan pembangunan projek dan kualitinya. Terdapat lima fasa dalam model RAD iaitu merancang keperluan, reka bentuk pengguna, pembinaan, pengujian dan pemotongan. Selepas ujian dilakukan oleh dua orang kanak – kanak ADHD, hasilnya adalah permainan dapat berfungsi dengan baik dan kanak – kanak ADHD boleh menumpukan perhatian dan memberi fokus kepada permainan. Mereka boleh bermain dan mengikuti arahan dengan baik dan ini menjadikan mereka dapat duduk diam. Untuk kesimpulannya, permainan ini dapat membantu merawat tingkah laku ADHD dan mendidik mereka terhadap akhlak dan nilai-nilai Islam.

ABSTRACT

Attention deficit hyperactivity disorder (ADHD) is a medical condition in which the person who have this kind of disease is unable to control their impulses and hyperactive. ADHD kids have three types of ADHD which are inattentive, hyperactive and impulsive. ADHD disease can be treat base on treatment that only focusing on changing behaviors. The most common problem is there are no specific game for ADHD kids with Islamic contents. Furthermore, the other problem is the contains of the existing games are not suitable with ADHD kids and there are no ADHD games that created specifically in Malay language. So, this game will educate them some Islamic moral values that they can practice and learn in their daily live and at the same time helping them in handling their behaviors as the game will grab their attentions. The goal of this project is to create a 2–Dimensional Islamic behavioral treatment game for ADHD kids where for controlling the behaviors and manners. To achieve this goal, the ADHD kid's behaviors and related game applications were study, designing and develop the mobile 2–Dimensional Islamic treatment behavioral game for ADHD kids and evaluate the effectiveness of AdabI game towards ADHD kids. The target ADHD kids are in range of age from 5 until 12 years old. The other target user are teachers and parents. This game will be developed by Unity application software and in *Bahasa Malaysia*. In this project, Rapid Application Development (RAD) is a suitable methodology to be used as it increases the speed of project development and its quality. There are five phases in the RAD model which are requirements planning, user design, construction, testing and cutover. After a test was done by two of ADHD kids, the results are the game is functions well and the ADHD kids can concentrate and give attention to the game. They can play and follow the instructions well and this make them to be able to seat still. For conclusion, this game helps to treat ADHD behaviors and educate them Islamic manners and values.

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CHAPTER 1

INTRODUCTION

1.1 Background of study

Attention deficit hyperactivity disorder (ADHD) is a medical condition or common place disease in which the person who have this kind of diseases has differences in mind development and mind hobby that affect attention, the capability to take a seat still, and unable to control their impulses (Hasan. S, 2017). There are three classes of symptoms that are inattentive, hyperactive and impulsive. Children who are inattentive (without difficulty distracted) have problem focusing their attention, concentrating, and staying on project. They may no longer concentrate properly to guidelines, may additionally omit important info, and would not end what they have start. They may daydream or dawdle an excessive amount of. They will seem absent-minded or forgetful. Besides, kids who are hyperactive are fidgety, stressed, and effortlessly bored. They will have hassle sitting nevertheless or staying quiet when needed. They will rush through things and make careless mistakes. They will climb, bounce, or roughhouse when they need to not. Without meaning to, they may act in ways that disrupt others. Ultimately, kids who are impulsive act too quick earlier than thinking. They often interrupt, would possibly push or clutch, and locate it tough to attend. They will do things without asking for permission, take matters that are not theirs, or act in approaches which are unstable. They will have emotional reactions that seem too extreme for the scenario. All this conduct or symptoms are happened many of the ADHD kids. In fact, such issues do no longer only occur in children however additionally in adults. Parents and teachers will note signs and symptoms of ADHD while a child could be very younger.

However, ADHD can be treat based on treatment that only focusing on changing behavior. There is some treatment which is a special education that helps a child learn at school. Having structure and a routine can help children with ADHD a lot. Moreover, behavior modification teaches ways to replace bad behaviors with good ones. Psychotherapy which is counseling can help someone with ADHD learn better ways to handle their emotions and frustration. Social skills training is also a treatment that can teach behaviors, such as taking turns and sharing. To help ADHD kids for controlling their behaviors, a 2-Dimensional Islamic game will be creating that provides a good manners and attitudes for they commonly apply in their daily routine base on Islamic values. This game is not just serve entertainment, but it is also give moral values that they can learn, understand and follow with the guide of their parents. This project is being chosen to create as there are no any existent applications or 2D game that have Islamic purposes in it especially for ADHD kids. There are many 2D Islamic games and applications for kids in the market but the Islamic 2D game for ADHD kids is rarely build and not exist at all. This game is the combination of Islamic education learning with the ways of treatment for ADHD kids. Besides, the creation of the game is better rather than creating an education learning application because it will give more impacts as kids nowadays like and easy to learn something from playing a game.

1.2 Problem statement

The first problem is there is no specific game for ADHD kids with Islamic content in the game. Mostly games for ADHD kids only for entertainment purposes and earlier education lesson which is does not suitable for ADHD kids. Besides that, there are a few of Islamic 2D games and application for normal kids that available in the market which is most of them containing the basic learning of Islam such as daily *dua*'s, morality and *Shalat* learning.

The second problem is the contains of the existing games are not suitable for ADHD kids which is not good for controlling their behavior and manner. Besides, the kids will influence with bad things as the word spoken by the character in the games is not suitable

and rude. Their behaviors and manners will be uncontrol when the game that they played is unsuitable as affect the way of their thinking and communication. The scenarios are getting worse for the parents and teachers to control and handle ADHD kids as they became more hyperactive and making more troubles whether at home or in the classroom.

The third problem is there are no games created that specifically in Malay language. It will be hard for ADHD kids who are not teach and speak in English at home or in the classroom to understand and play the games. The different language used within their parents and teachers in communication with the language that the game used will make them confuse. So, the games in Malay language should be created as there are no any application and games that have been created with it yet.

1.3 Objectives

The goal of this project is to create a 2-Dimensional Islamic behavioral treatment game for ADHD kids for controlling their behaviors and manners. To achieve the state goal, there are three objectives that identified as follows:

I. To study the ADHD children behaviors and related game application.

II. To design and develop a mobile 2-Dimensional Islamic behavioral treatment game for ADHD kids.

III. To evaluate the effectiveness of the AdabI game towards ADHD kids.

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