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JUDUL: INTERACTIVE CD KARAOKE OF *SIFIR* SONG

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INTERACTIVE CD KARAOKE OF *SIFIR* SONG

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This report is submitted in partial fulfillment of the requirement for the
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FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITY TEKNIKAL MALAYSIA MELAKA
2008

DECLARATION

I hereby declare that this project report entitled

Interactive CD Karaoke of *Sifir* Song

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

STUDENT : _____ Date: 23/6/08

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SUPERVISOR: _____ Date: 23/06/08

EN. IBRAHIM BIN AHMAD

DEDICATION

To my beloved family, lecturers and colleagues

Who always encourage me with moral support to make this thesis complete. Although mere thanks are inadequate, I sincerely thank all of them.

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ABSTRACT

The purpose of this research is to explore the use of multimedia elements it useful in learning process. This project is focusing for multiple numbers. The current methods of learning basically are still paper-based, in the classroom and some application on internet. There are problems where not all the information can understand by student in classroom and difficult to student to memorize the table. The aim of this project is to solve those problems. With good integrated of multimedia elements that use in this project such as graphic, audio, animation and text can make this CD application more interactive, therefore user can easily memorize the table. To understand the problem faced by user which is kids, a discussion of the problem that children faced and how interactive CD karaoke can help them is carried out. To solve this problem, research about the user interface, the content of the application and the navigation of the map are carried out to build the suitable application. Once the analysis is complete, the system is developed according to the result of the analysis phase with the user requirements in mind.

ABSTRAK

Tujuan penyelidikan ini adalah untuk meneroka penggunaan elemen-elemen dalam multimedia di dalam proses pembelajaran. Projek ini fokus kepada sifir. Pada asasnya, pembelajaran pada masa kini adalah masih berpandukan kertas, buku, pembelajarn di dalam kelas, dan beberapa website. Terdapat masalah-masalah di mana tidak semua pengajaran yang disampaikan oleh guru dalam bilik darjah dapat difahami dan sukar bagi pelajar untuk menghafal nombor sifir. Matlamat projek ini adalah untuk menyelesaikan yang masalah-masalah tersebut. Dengan adanya pengunaan elemen-elemen multimedia seperti grafik, suara, animasi dan teks boleh membuat aplikasi CD karaoke ini lebih interaktif, oleh itu pengguna dengan mudah menghafal sifir. Untuk memahami masalah dihadapi oleh pengguna terutamanya kanak-kanak dalam menghafal sifir, satu perbincangan tentang masalah tersebut dengan guru-guru dan ibubapa diadakan. Untuk menyelesaikan masalah ini, penyelidikan mengenai antara muka pengguna, kandungan aplikasi dan peta aliran dilaksanakan untuk menghasilkan satu aplikasi yang sesuai. Apabila fasa analisis tersebut telah dilaksanakan, aplikasi CD itu telah dibangunkan mengikut hasil fasa analisis sesuai dengan keperluan pengguna

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INTRODUCTION

1.1 Project background

Education contains teaching and learning specific skills, and also something less tangible but more profound, the imparting of knowledge, positive judgment and well-developed wisdom. Education has as one of its fundamental aspects the imparting of culture from generation to generation. The education of an individual human begins at birth and continues throughout life. Start from baby, we learn how to walk, eat, talk and so on. From day to day, people learn something new in the life. Therefore education can not be separated in human life.

According to Bill Gates (1996) and Noorizami (2005), education will be an individualistic and personal. Fully suspension on teachers and text book is considered primitive. It was not effective anymore for student's increase of knowledge.

Currently technological development undeniable again and from time to time more exist new discoveries of this technology. With this technological development also many approach use these technologies in various fields include process of education and learning. The implementation of new approach in teaching and learning make teachers to change their role from the instructor to facilitator.

Teaching based on exposition method has change to student implement their own learning plan and try to attain the specific criteria. While teachers just have to

ensure that student success in doing their learning plan. Besides that, the strategy that could be use by teacher is change the way of teaching and learning at school by integrate the technology into teaching. For example, in each school nowadays has their own lab that has a lot of computer to help student in more understanding and can exchange their opinion with other friends in different location.

The CD based on courseware or teachware is one of this example that use different pedagogy that can be display using computer. Nowadays, there are many CD karaoke is used to teach student such as CD karaoke of prayer and CD karaoke of *sifir*. The existing CD karaoke of *sifir* that has been in the market just only use audio and video as an approach to teach the students who age between 5 to 12 years old. The existing CD karaoke is not interesting that not really influence user to memorize the table. Therefore, this project that will be developed will use elements of interactive multimedia which are will combine audio and 2D animation character as a background of the *sifir* song to interest the target users to watch this CD repeatedly and felled at easy to memorize *sifir*.

Educational animations are animations produced for the specific purpose of fostering learning. The popularity of using animations to help learners understand and remember information has greatly increased since the advent of powerful graphics-oriented computers. This technology allows animations to be produced much more easily and cheaply than in former years.

Based on the definition of educational animations above, by using 2D animation in this CD karaoke hopefully will ease the user to understand and memorized the *sifir* number from number 2 until 9. The target user is children which age between 5 to 10 years old that in this age they easily influence by environment and easy to learn from what they see. Besides, from this project, the developer will know how to apply multimedia skills to develop interactive CD karaoke.

1.2 Problems statement

In the classroom environment, teacher handle about 20 to 40 students per classroom, therefore learning traditionally needs a higher attention from teacher and sometimes teacher can not give an attention for each students. Learning can not directly to all students. Based on that, other approaches or methods are useful to make sure they can learn and understanding what they learn in the school. Therefore, interactive CD karaoke of *sifir* is one of the example, where as the users can use it by personal or by group.

The existing CD karaoke is not interesting that not really influence user to memorize the *sifir*. With this interactive CD karaoke of *sifir,* the users can select which *sifir* they want and the user can manage their time more efficient. Moreover, the application of audio and 2D animation in this CD karaoke will influence the users to watch repeatedly and memorize the *sifir*. The 2D animation that will be develop in this interactive CD karaoke will attract the user specially children because the using of the colorful animation.

Besides that, by using traditional method where teacher or children use books as the reference to teach and learn, usually books easily broke and could not stand for long. Therefore, with the use of this interactive CD karaoke, those problems will be solved. They no need to buy a lot of *sifir* books and bring it along. By using this CD, it can be easily to take and it also can make a copy and permanently save in computer or in other devices.

1.3 Objectives

When developer determine to develop a new project, it will be compulsory to have the objectives or goals in the end of the project. The objectives or goals refer to something that what the developer want to achieve in the end of the project. The goals of developing this interactive CD karaoke of *sifir* as state as below:

- To develop interactive CD karaoke of *sifir* song
- To provide an easy approach to memorize the multiplication numbers.
- To know the effectiveness of Interactive CD karaoke of *sifir* song

1.4 Scope

The scopes of the project refer to the boundaries, constraint or the limitation the project. In this project, the specific users are only children at age between 5 to 10 years old. The other limitation of this CD karaoke is the *sifir* song include in this courseware from number 2 until 9. The character will create 2D animation in this CD karaoke only suitable for students at kindergarten and elementary school. This CD karaoke also can be display all general about 5 minutes for each number depends on the *sifir* song. Besides, this CD karaoke of *sifir* will use Microsoft Window XP Professional as a platform and the users who only have computer can use this CD karaoke.

1.5 Project significant

The significant of this project will divide of two kinds of people which are instructor and the user. First, the application of audio and 2D animation will interest the target users which are student between age 5 to 10 years old to watch this CD karaoke and easy to memorize the *sifir* which is multiplication of the number. Second, the instructor such as teacher and parents will have extra medium to train the children in teaching and learning process. They just only need a CD and computer, and the process of teaching can be ease.

1.6 Expected result

Good graphic will apply in this project. With this good graphic will make users watch repeatedly and give users easy to remember the *sifir*. Besides that, this project will use interactive CD karaoke where user can select which *sifir* they want. It is different with the existing CD karaoke where the users no have choices and need to flow all the *sifir*. If the user are already expert and remember the *sifir* 2, 3, 4 but the need to flow the steps, therefore the users will spend more time.

1.7 Conclusion

This chapter discuss about the summary of the project that will be developed known as interactive CD karaoke of *sifir* for the target user between ages 5 to 10 years old. This chapter consists of six sub-topics which are project background, problems statement, objectives, scope and project significant. In the project background, developer discuss about history of animation and a briefly explanation of the overall of the project. In the next chapter will discuss about literature review and project methodology. In the problems statements, developer discuss about the problems and the lack of the existing product.

The goals of the project were discussed in the objective sub-topic. In the scope discussed about the limitations of the project. In the project significant discussed about the benefits of the project which is help instructor to teach the children and the users can ease memorize the *sifir*. In the expected output discussed about the expected result of this project which is develop interactive CD karaoke of *sifir*. In the next chapter will discuss about the literature review and methodology that used in this project.

CHAPTER II

LITERATURE REVIEW AND METHODOLOGY

2.1 Introduction

This chapter will discuss in detail about the literature review and the project methodology that used to develop this project. The literature review and the project methodology briefly review the specific factor and research about the project and the significant between the earlier project and the existing project. Literature review is provides a background to the topic, a summary and an evaluation of previous research or work on a topic and it should be selective. The domain of the project will discuss in the domain sub topic that refer to what kind of the project that will be developed. After that, the existing system or existing product that have similar characteristic with this CD karaoke will be studied and the weakness of the product will be carried out to make a comparison to the project.

Besides that, the resources books, journals, conference papers, dissertations, electronic databases, and government publications will be studied to make a review of the past and the current system that related to this project. The purposes of the literature review are to justify choice of research or project, to establish the importance of the topic, to provide background information needed to understand the project, to see what has and has not been investigated, to discover how a project is related to the work of others. Other than that, this chapter also will cover the methodology that refers to what kind of the model that will be suitable to develop this project. Besides that, the hardware and software requirement that need for project development also reviewed.

2.2 Domain

Domain refers to the main category that the project filled in. After decided the title of the project, the developer needs to determine the domain of the project based on the title that have been chosen. This interactive CD karaoke that will be developed is one of the learning content domains where this CD karaoke is used as one of the approached in learning process. This CD karaoke will be use to teach the target users about the multiplication number.

2.3 Existing system

Multiple intelligences are an educational theory, first developed by psychologist Howard Gardner, which describes an array of different kinds of "intelligences" exhibited by human beings. Gardner suggests that each individual manifests varying levels of these different intelligences, and thus each person has a unique "cognitive profile." The theory was first laid out in Gardner's 1983 book, *Frames of Mind: The Theory of Multiple Intelligences*, and has been further refined in subsequent years.

The theory was proposed in the context of debates about the concept of intelligence, and whether methods which claim to measure intelligence (or aspects thereof) are truly scientific. Gardner's theory argues that intelligence, as it is traditionally defined, does not adequately encompass the wide variety of abilities humans display. In his conception, a child who masters the multiplication table easily is not necessarily more intelligent *overall* than a child who struggles to do so. The second child may be stronger in another *kind* of intelligence, and therefore may best learn the given material through a different approach, may excel in a field outside of mathematics, or may even be looking through the multiplication learning process at a fundamentally deeper level that hides a potentially higher mathematical intelligence than in the one who memorizes the concept easily. The theory suggests that, rather than relying on a uniform curriculum, schools should offer "individual-centered education", with curricula tailored to the needs of each child. Gardner identifies

kinds of intelligences based upon eight criteria. His eight criteria for describing something as an independent kind of intelligence (rather than merely one of the skills or abilities included in a kind of intelligence, or a synonym for, or combination of other kinds of intelligence) include:

- case studies of individuals exhibiting unusual talents in a given field (child prodigies, autistic savants);
- neurological evidence for areas of the brain that are specialized for particular capacities (often including studies of people who have suffered brain damage affecting a specific capacity);
- the evolutionary relevance of the various capacities;
- psychometric studies; and
- The existence of a symbolic notation (e.g. written language, musical notation, choreography).

Gardner originally identified seven core intelligences: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal and intrapersonal. In 1999 he added an eighth, the naturalistic intelligence, and indicated that investigation continues on whether there is an existential intelligence.

The theory has been widely criticized in the psychology and educational theory communities. The most common criticisms argue that Gardner's theory is based on his own intuition rather than empirical data and that the intelligences are just other names for talents or personality types. Despite these criticisms, the theory has enjoyed a great deal of success amongst educators over the past twenty years. There are several schools which espouse MI as pedagogy, and many individual teachers who incorporate some or all of the theory into their methodology. Many books and educational materials exist which explain the theory and how it may be applied to the classroom. (Adrien-Luc Sanders, 2002)

The quality of a computer animation sequence is in the overall quality of the depiction of the action rather than in the beauty of individual frames. We therefore stress throughout on the overall process of the depiction of action while maintaining the quality of individual frames. As corrections are expensive both in terms of effort and finances, we follow a well-planned systemic methodology for execution, which

is essential for ensuring success. Our well-defined methodology ensures quality verification at each progressive stage and minimum loss of effort.

Video is a good way of showing and telling the trainees about how to perform the tasks. They can present factual and conceptual information with visual illustrations, animations, and graphics. This type of media is portable and can be made available to the trainees anywhere and anytime. According to a survey 96% of the companies with the strength of 50 or more use video as a training method. This method is rated as second best after classroom instruction.

Video is a one-way communication system and has a disadvantage of no interaction session; therefore, companies use video along with other training methods. Video is used to enhance the training program. The video recording and playback feature eliminated the use of film.

Advantages of Videos

- It can easily be duplicated
- It is reusable and portable
- It can be used by the trainees at their convenience
- It can save the travel expenses and time
- It can bring productivity savings

Disadvantages of Video

- Information may not be specific to the training but it must appeal to large audience
- Trainees control the process of learning, which can sometimes lead to leniency on the part of trainees causing waste of resources, time, and money
- Learning at homes can bring many distractions, which in turn may result that trainee can stop the video anytime for his personal work
- Trainee may also fast-forward many parts, if he finds the video boring

The adept 2D animation and 3D graphics for Flash, which being vector based drawings are lightweight and easier to manipulate. It allows us to create cartoon vignettes that are easily ported to the web. Take a look at our showcase of 2D animation.The quality of a computer animation sequence is in the overall quality of the depiction of the action rather than in the beauty of individual frames. Therefore stress throughout on the overall process of the depiction of action while maintaining the quality of individual frames. As corrections are expensive both in terms of effort and finances, we follow a well-planned systemic methodology for execution, which is essential for ensuring success. Using well-defined methodology ensures quality verification at each progressive stage and minimum loss of effort.

In psychology and education, a learning theory is an attempt to describe how people and animals learn, thereby helping people to understand the inherently complex process of learning. There are three main categories or philosophical frameworks under which learning theories fall in behaviorism, cognitive, and constructivism. Behaviorism focuses only on the objectively observable aspects of learning. Cognitive theories look beyond behavior to explain brain-based learning. And constructivism views learning as a process in which the learner actively constructs or builds new ideas or concepts.

In developing this project, constructive theory will apply where it describes how learning should happen, regardless of whether learners are using their experiences to understand a lecture or attempting to design a model airplane. In both cases, the theory of constructivism suggests that learners construct knowledge. Constructivism as a description of human cognition is often associated with pedagogic approaches that promote active learning by doing.