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JUDUL: **INTEGRATING AUDIO IN LOCAL EDUTAINMENT PROGRAMS FOR TODDLERS**

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INTEGRATING AUDIO IN LOCAL EDUTAINMENT PROGRAMS FOR TODDLERS

LOW WEI SHANG

This report is submitted in partial fulfilment of the requirements for the

Bachelor of Computer Science (Interactive Media)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2014

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I hereby declare that this project report entitled

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ABSTRACT

The implementation of audio into a video footage has always been ignored upon by many video producers. This will cause children to not only reap the benefits of the implemented audio, but worse, may also lose interest in the program entirely. It is believed that the inclusion of proper audio which encourages learning into children edutainment television programs will have great affects in future cognitive developments. Therefore a research will be made to identify the most suitable audio for local edutainment programs for toddlers. This research will then lead to a prototype production based on the gathered and analyzed data. It is believed that a standardized method of creating and implementing audio for children will then be able to be produced.

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ABSTRAK

Audio di dalam sebuah video seringkali diremehkan oleh para poduser video. Mereka tidak faham akan kepentingan bahagian ini. Ini akan menyebabkan penonton video hilang perasaan yang sepatutnya dialami jikalau audio yang dimasukkan tidak menarik. Oleh itu, pertimbangan yang baik perlu dilakukan untuk apabila memilih jeniz muzik dan audio yang sesuai untuk filem yang akan diproseskan. Kanak-kanak akan lebih menyukai jikalau sesebuah rancangan itu mempunya muzik yang kreatif dan menarik di mana mereka boleh sambil menyanyi, sambil menari dan memahami perkara yang ingin disampaikan oleh rancangan kanak-kanak itu. Oleh itu, adalah diharapkan dengan membuat Projek Sarjana Muda ini, dapatlah kita ketahui kaedah-kaedah yang sesuai untuk mengubah muzik yang bagus untuk mendapat menarik perhatian para kanak-kanak.

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DEDICATION

I would like to dedicate this entire project to my family members, girlfriend, close friends, my lecturer and also everyone who has made this project possible.

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I would like to dedicate this entire project to my family members especially my parents, who have been supporting me not only emotionally, but also financially throughout this entire project. Besides that, I would also like to dedicate this to my fellow classmates Juanna Beh and also Husna Izzati. Without them, my project would just be a one man show, where all I've done would seem lonely and meaningless. Not to forget, my girlfriend who has always been by my side guiding me with minor details and also supporting me emotionally. Lastly, I would like to sincerely thank my supervisor, Dr. Hafiz for all the help and time he has poured on me. His guidance will forever be one of the few things I will hold dearly throughout my entire varsity life.

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CHAPTER I

INTRODUCTION

1.0 Introduction

One of the main source of entertainment for children would be television shows. Parents are often encouraged to let their child watch some useful edutainment shows on television. If a program is interesting and provides good educational values, it is then recommended for children to watch such programs. There are indeed quite a number of research which actually supports the fact that educational programs do play a great role in the development of children's learning. Not only that, but it is also believed that these positive impacts will continue to be of use when they move on to the next stage in life. Kids who watch informative and educational shows as preschoolers tend to watch more informative and educational shows when they get older. They use TV effectively as a complement to school learning. (Macbeth, 1996). Some TV shows are there to educate, and also give information while also inspire the minds of young ones. It is more effective compared to books as it has more interesting features like movements, actors acting, or also beautiful animation which would grasp a child's attention. However, the limit of children edutainment shows can only go so far if it does not have the proper audio to actually pull out the potential of the show. A show teaching about numbers can be boring pretty fast if it does not have interesting soundtrack to keep them running. Edutainment children programs like America's "Barney & Friends" or Australia's "Hi-5" manage to be worldwide phenomenon among children is highly due to their interesting

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musical numbers that appears throughout their show. Hi-5 will feature music and movement that would attract children's attention. Hi-5 aims to cater to a wide range of young children with a wide range of cognitive abilities and learning styles (Helena Harris, 1999). Malaysian toddler edutainment shows are still very weak in the audio aspect for their shows. Therefore this research will focus on the type of music most suitable and would highly attract the attention of children for edutainment shows of Malaysia. A prototype of self composed music will be made and analyzed for this final year project thesis.

1.1 Project Background

Audio in the form of music has been proven to have great affects in improving a child's learning capability. It is said that suitable and attractive music will be able to attract a child's attention and therefore making them more alert and aware of the things that they are learning.

Musical activity throughout life may serve as a challenging cognitive exercise, making your brain fitter and more capable of accommodating the challenges of aging. (Brenda Hanna-Pladdy, 2011). International children edutainment programs like "Barney & Friends" and "Hi-5" have great ratings because it is interesting and informative at the same time. However, the local scene is yet to gain a breakthrough in this matter due to their lack of suitable audio to blend in with the local edutainment programs. This will cause children to not only reap the benefits of the implemented audio, but worse, may also lose interest in the program entirely. It is believed that the inclusion of proper audio which encourages learning into children edutainment television programs will have great affects in future cognitive developments. Therefore a research will be made to identify the most suitable audio for local edutainment programs for toddlers. This research will then lead to a prototype production based on the gathered and analyzed data. It is believed that a standardized method of creating and implementing audio for children will then be able to be produced.

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1.2 Problem Statements

The issue that we are faced with is that Malaysian children edutainment programs do not focus on attractive audio to pull or attract the attention of children towards the show. Besides that, Malaysian children edutainment programs also frequently do not include music or audio which will actually aid the actual learning process of the child from the particular program.

1.3 Objective

The goals of this project are as below:

a. **To investigate the type of audio which will grab a child's attention and aid it's learning process.**

   This objective is made to identify out which type of audio would actually be necessary and useful and attractive to a particular child. If the music is deemed interesting and catchy for the child, then this aspect would be proven a success.

b. **To analyze the type of audio which is able to attract a child's attention and aid it's learning process.**

   This objective is to analyze whether the researched methods and characteristics are effective in actually attracting a child into learning what the video has to offer. This data will then be categorized and merged together for a comparison to view the data collected.

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c. **To develop a prototype which gives the most positive impacts on children's attention and learning process.**

Through analysis of the data collected, a prototype will be made to accommodate the research. The data will be used to output a prototype where a children's television segment will be made based on an interesting song.

d. **To test the prototype and attain results regarding its impact towards a child's learning capabilities.**

The prototype will then be used to test on subjects. The subjects will then be taken down their response to see whether the prototype created would be a success or failure.

1.4 Research Questions

i) **Does audio play a role in affecting a children's attention?**

Audio has always been neglected in many forms of media be it from television shows, to you tube streamed episodes. Audio has always been looked down lightly and people feel that they do not play an actual significance in the overall feeling the video is trying to prove. Especially children show. A very interesting song plays an important part in making a child remember whether or not that particular curriculum can be remembered with ease. The aim of audio is to attract children more and make them pay more attention to what they are viewing.

ii) **How can the correct audio attract viewer's attention?**

Making and composing music is also quite like math. There are formula's involved which make audio creation to be good. If one does not follow the necessary techniques, steps, and formulas, then an audio would usually be

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deemed a failure and make a video worse. By implementing the correct ways of music production, then only can an audio be able to not only attract attention, but also make them remember more the meaning and contents from the specific music.

1.5 Project Scope

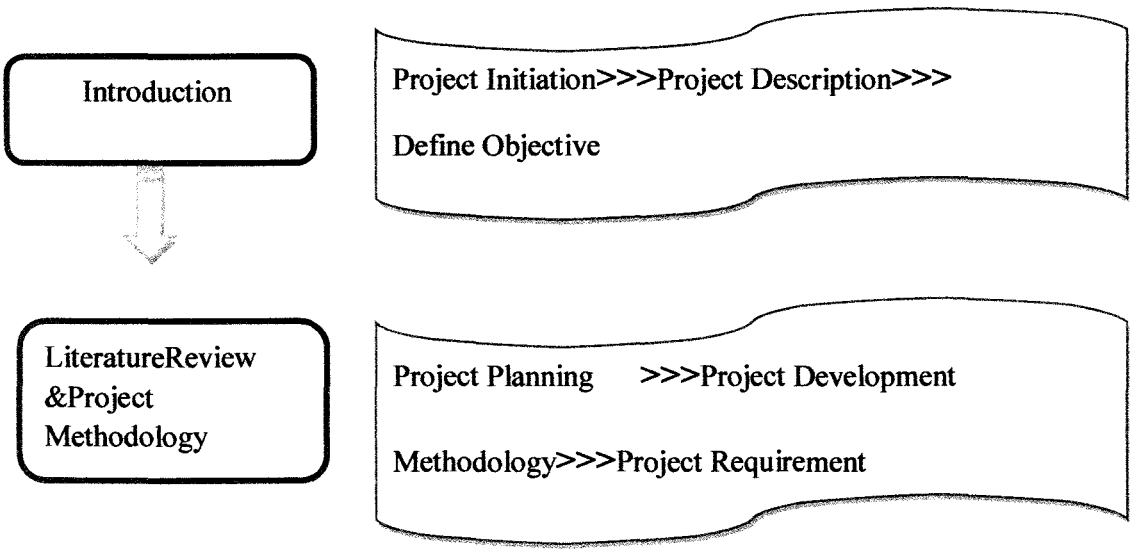
i) Target audience

The target audience for this project is children from pre-schools. The age for toddlers who are residing in pre-schools in Malaysia are aged between 5-6 years old.At this age, they learn basic math like subtraction, therefore making it suitable for them.

ii) Video Duration

The duration of this short segment of a children's program, would be 4 minutes.

1.6 Project Framework



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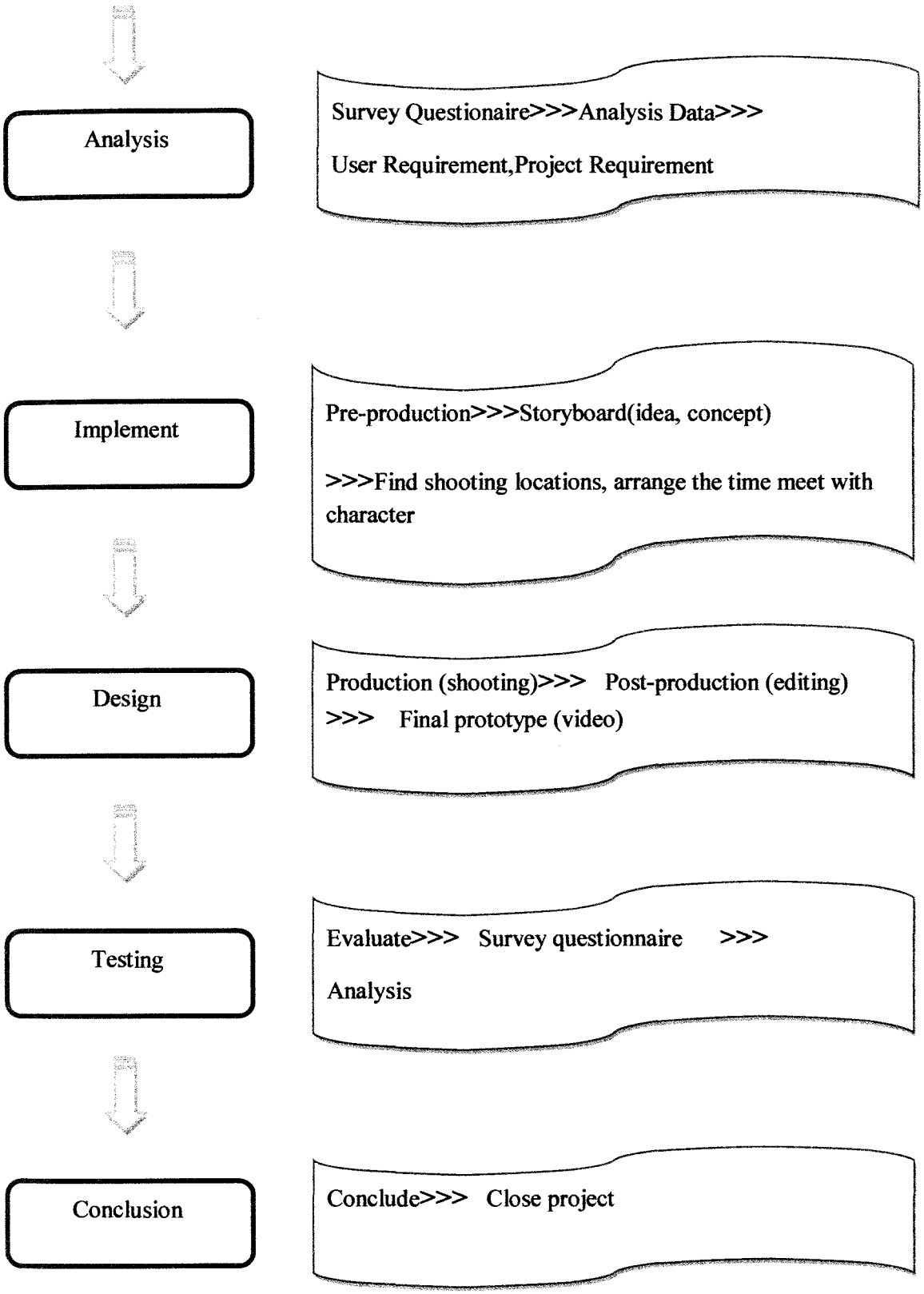

Figure 1.1: Project framework

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1.7 Project Significance

This project has major significance in identifying the usefulness of audio when being merged with a video. By doing this, one can realize how the music of a specific scene could affect a user. The music can bring out the true emotional feelings like sadness, happiness, anticipation, fear and many more. Audio in a whole strongly plays a part in a user's experience when watching that particular show.

Therefore, by identifying the important of audio, we can then utilize the proper techniques needed to compose the proper music to match the video's mood. Composing music also need to have proper techniques and formula's in order to make it work for the people that are intended to watch the show. In this case, our target audience are pre-school children who would enjoy more lively and upbeat songs. Therefore, the techniques used to create upbeat sounds and movements are important in order to successfully get a child's attention.

If music is made just to fill in the empty space and blanks of a video production, then that video will surely meet with unforeseeable failure. Music has to be made with the correct sound and through the techniques researched in order to reach the objective of the video. Therefore this project is significant in identifying whether applying said techniques, will really grasp the attention of the said respondents of pre-schoolers.

1.8 Summary

It is believed that the inclusion of proper audio which encourages learning into children edutainment television programs will have great affects in future cognitive developments. Therefore a research will be made to identify the most suitable audio for local edutainment programs for toddlers. This research will then lead to a prototype production based on the gathered and analyzed data. It is believed that a standardized method of creating and implementing audio for children will then be able to be produced.

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CHAPTER II

LITERATURE REVIEW

2.0 Literature Review

This chapter will discuss about the basic concept of audio in terms of its affects and usage in broadcasted television. Besides that, this chapter will also include some findings regarding the usage of audio or music towards children. Here we can understand how children will be able to gain more learning attention from shows which provide interesting song scores for their segments. A few other examples of national television shows like Hi-5, Barney and Friends, and Sesame Street will be included in this section to understand better the effectiveness of audio.

2.1 Area of Study

2.1.1 What is Audio

Audio is considered as a sound within the available acoustic range humans can actually hear. An audio frequency or also known as (AF) is a type of electrical alternating current which can be located within the 20 to 20,000 hertz range that we usually consider in the productions of acoustic sound. According to a website definition of audio, "An audio is the sound system that comes with or can be added to a computer. An audio file is record of captured sound that can be played back, Sound is a sequence of naturally analogue signals that are converted to digital signals by the audio card... when sound is played, the digital signals are sent to the speakers where they are converted back to analogue signals that generate varied sound." (Margaret, 2005). With that being defined, it is understandable that audio is a form of digitalized and processed

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sounds which will pass through a computer. When it is passed through the computer in the manner through analogue means, we will then have what we call a digital audio which can be edited and changed to our likings.

Audio files will usually be compressed into a certain file format for storage purposes or faster transmission of files. Audio files can be sent in stand-alone segments which are short. For example, files with the wave file format can be sent into different segments based on the frequencies which are needed. In order for users to actually hear or listen to the full intentional quality of the audio, the sound must be played out in a continuous format. This type of format is known as streaming sound. Among the most popular format for audio use for home users are MP3 which is also known as MPEG-1 Audio Layer-3. Certain professionals in the recording or broadcasting industry will use other popular formats like the Wave file format for its raw and uncompressed form. This will ensure smoother editing with better frequency adjustments in the post processing stage.

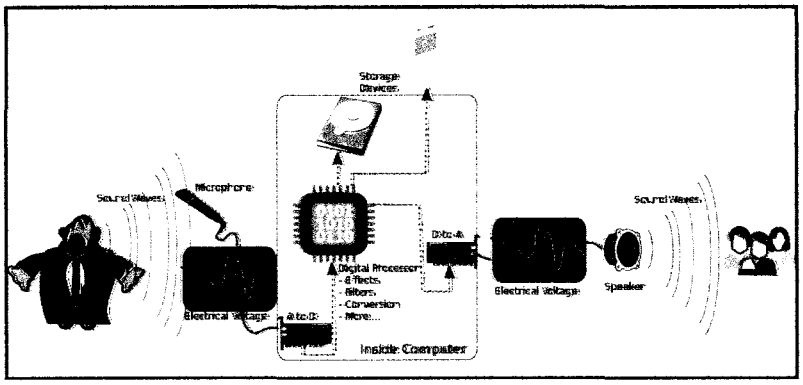

Figure 2.1: Audio Wave Signal

2.1.2 Music and children's learning

It is believed since ages ago that musical training from a young age helps in developing brain areas involved in a child's learning in language and reasoning. It is thought that even many years after birth, the brain continues to develop within a child. Studies have clearly indicated and shown that with the aid of musical exposure, the brain is able to develop into being able to process language better with the brain adapting into situational moments which is linked back with music. The ability to also put a

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connection with familiar and educational songs can also help a child's mind to remember the important stuffs better educationally.

According to a recent study, "Early musical training helps develop brain areas involved in language and reasoning. It is thought that brain development continues for many years after birth. Recent studies have shown that musical training physically develops the part of the left side of the brain known to be involved with processing language and can actually wire the brain's circuits in specific ways. Linking familiar songs to new information can also help imprint information on young minds." (ChildrenMusicWorkshop, 2013).

Children who also learn music can also push their brains to think in a more creative manner and it is useful in solving problems. Their imagination can be pushed further for various solutions which reject outdated rules and assumptions. It is said that questions about the arts do not have only one right answer.

A study of the arts also provides children with a glimpse across cultures and teaches them to empathize with other cultures. Besides that, music also gives children a means of self-expression. It is able to give life more meaning and also to reach for a higher stage of the development of a child's mind. Everyone needs to be in touch with the artistic sides of them and this can actually provide a child with more self esteem.

Music participation can have very beneficial effects on reading and mathematics achievement in early childhood to adolescence. Music has always been positively associated with academic achievement, especially seen when in the high school years.

2.1.3 The way children see television

It is said and has been proven by researchers that when children watch television, they do not see and experience the same things that grown-ups tend to do. Different age groups of children will have different reactions as to how television actually does for them.

In general, preschoolers have a few characteristics which indulge them into television. Preschoolers will usually focus on the visual aspects of TV. This is to say that vision

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