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JUDUL: DIGITAL 3D ANIMATION: HEALTHY DIET FOR CHILDREN BY USING CINEMATOGRAPHY TECHNIQUES

SESI PENGAJIAN: 2015

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Tarikh: 25/08/2015

(TANDATANGAN PENYELIA)
MR. MOHD ADILI BIN NORASIKIN
Nama Penyelia

Tarikh: 10/9/2015

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DIGITAL 3D ANIMATION: HEALTHY DIET FOR CHILDREN BY USING CINEMATOGRAPHY TECHNIQUES

GOH WAN BING

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNINVERSITI TEKNIKAL MALAYSIA MELAKA
2015

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DECLARATION

I hereby declare that this project report entitled

DIGITAL 3D ANIMATION:
HEALTHY DIET FOR CHILDREN BY USING CINEMATOGRAPHY TECHNIQUES

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

STUDENT : _____ Date: 18/9/15

(GOH WAN BING)

SUPERVISOR : _____ Date: 18/9/15

(MR. MOHD ADILI BIN NORASIKIN)

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DEDICATION

To my beloved parents, thanks for always support me along whole project.

To my supervisor who guide and support me along the completion of this final year project,

Mr. Mohd Adili Bin Norasikin (UTeM).

To my evaluator who give useful opinions,

Mr. Ahmad Shaarizan Bin Shaarani (UTeM)

And last but not least, to all of my beloved friends that sharing their knowledge and help me from beginning to the end of this project.

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Thanks for all of the people who help me in this project.

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ABSTRACT

Digital 3D animation: Healthy Diet for Children by using Cinematography Techniques is Final Year Project for Bachelor of Computer Science (Interactive Media). This is an animation which contains local food, information of healthy diet and bad impact of unhealthy diet as content. This project also include cinematography techniques, the techniques included ambient occlusion, bright colour and lighting, camera shot and some preferences. This project mainly uses Autodesk Maya 2014, Adobe Premiere Pro, Adobe Photoshop and Audacity to complete it. Children aged 7 to 11 years old are the target users of this product. This is because many students know about good and bad food but do not know how to having balanced diet, such as serving size and quantity of food.

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ABSTRAK

Animasi 3D ini adalah mengenai makanan sihat untuk kanak-kanak dengan menggunakan teknik sinematografi. Projek ini adalah projek sarjana muda untuk Ijazah Sarjana Muda Sains Komputer (Media Interaktif). Animasi ini mengandungi makanan tempatan, informasi tentang makanan sihat dan kesan buruk pemakanan yang tidak sihat. Projek ini juga mengandungi teknik sinematografi, teknik yang dikaji adalah "ambient occlusion", warna dan cahaya yang terang, shot kamera dan kegemaran yang lain-lain. Projek ini dihasilkan dengan menggunakan Autodesk Maya 2014, Adobe Premiere Pro, Adobe Photoshop dan Audacity. Kanak-kanak berumur 7 ke 11 tahun adalah sasaran pengguna. Hal ini kerana kebanyakan pelajar tahu mengenai makanan yang sihat dan tidak sihat, tetapi mereka tidak tahu bahawa bagaimana makan dengan sihat dan seimbang, contohnya saiz sajian dan kuantiti makanan.

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LIST OF ABBREVIATIONS

3D	-	**Three Dimension**
2D	-	**Two Dimension**

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CHAPTER I

INTRODUCTION

1.1 Project Background

According to South East Asian Nutrition Survey (SEANUTS), it shows that one in every five children is overweight. Institute for Public Health and Ministry of Health of Malaysia has been carried out the study about urban areas have more overweight children, it shows that many guardians are busy on working and less rather have time to prepare home-made meals for children, therefore they choose to eat at hawker stalls and fast food restaurants. The food contains high saturated energy and saturated fat which are not good for health.

Junk food have high contents of fat, salt, sugar and calories. Meanwhile, healthy diet helps maintain and improve our health by supports energy needs and provides essential nutrients for our body. A healthy diet can reduce health risk such as obesity, heart diasease and diabetes. In addition,consuming of junk food can alters brain activity which is similar as addictive drugs. Children need to reduce intake of junk food for a healthy life and the other hand excel in academic and co-curiculum.

According to several studies, animation definitely is one of successful medium to teach and changing attitude of children. Animation can increase audience's sense of reality, therefore increase motivation of viewers. Animation can understood and remember easily, it is fun and enjoyable. Ian Diamond (2011) state that cartoon is excellent medium to deliver positive message and can create

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awareness among kids because it is like the characters speak to you and narrates the story by gestures. Animation can attract the children significantly and reduce level of abstract ideas. This is the reason this medium have been choose.

Cinematography is an art of visual storytelling. It is include camera shots, camera angles, size, distance, camera movement and lighting. Virtual cinematography can make use of the shot to communicate and interpret the story's perspective. It can create virtual cinematography which is story-driven and context-aware. Different shooting technique can produce different effect, suitable shot can make ordinary thing become attractive, however not suitable shot can make nice thing become not appealing. It is shows that the arrangement of camera will affect how the video express the message, atmosphere and effect. Arrangement of real camera has many restrictions such as terrain, weather and lighting, but virtual cameras do not have such restriction. Virtual camera can put on any coordinate and curve.

According to research which has been carried out by Kara Chan, Vivienne Leung and Lennon Tsang (2013), 28 hours of US children television shows 91% of food advertisements were junk food. In 2010, result of Moon showed that the food advertisements encouraged the viewers eat the unhealthy food by using collaboration of sensory and emotional appears, there are smell, taste or mood alteration. This study also showed some advertisements misleading to child audience. The attention-getting devises, for example, animation employed frequently. Mehta et al (2012) showed one of form which commonly used to promote food to children directly is cartoon.

According to research which has been carried out by Verma Ruchi (2014) and Mishra Sunita (2014), animations have huge influence on eating habit of children, which is 85%. The children tend to observe and learn behaviour from their favourite cartoon. The study in Parkistan which carried out by Muhammad Haroon, Hafiz Muhammad Fakhar Zaman, Huma Rasheed, Muhammad Yousuf Khan Marri and Yasir Mehmood Raja (2013) shows that Cartoon TV advertisements are more favourable by the children than non-cartoon advertisements. The children feel non-cartoon TV advertisements not as entertainment as cartoon TV advertisements. This

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shows that the children more attracted by cartoon characters which are imaginary and the cartoons contain funny element.

Therefore animation is an effective way to deliver the information about healthy diet to the children. This animation shows about having healthy diet and the quantity of every food groups in a meal.

1.2 Problem Statements

The problems that occur before build this project are:

- The children like to eat junk food instead of having healthy diet.

  According to the journal paper which is written by Sharifah Intan Zainun Sharif Ishak, Shamarina Sohaim and Mirnalini Kandiah (2013), this research is focuses on Malaysia children, the interview shows children like to consume western fast foods. It is because it can be access easily, such as home and canteen.

- Parents are busy on works and does not take care diet of children.

  According to Institute for Public Health and Ministry of Health of Malaysia (2013), the research shows parents are busy on their career and they do not have time to prepare home-made meals for their children, this cause the children go to hawker stalls and fast food restaurants to having the meals. The hawker stalls or fast food restaurants sell the food which are high saturated energy and saturated fat.

- Health problem of children are arise.

  The risk of chronic disases can be reduce when the children make the good food choices. Childhood obesity levels in our country is consider high in Asian and it has been identified the risk of getting diseases, such as cancer, hypertension, cardiovascular disease and type 2 diabetes are higher in adulthood. Nutritionist Assoc Prof Dr Norimah A Karim (2012) state that unbalaced diet can cause health problem now and future.

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1.3 Objective

Main objective to developing this project is to improve the current animation product and solve the problem. The objectives are:

- To study the best cinematography techniques for child.
- To develop 3D animation on healthy diet to promote healthy food for children.
- To evaluate impact of the product on awareness of healthy diet to 7 to 11 years old of children.

1.4 Project Scope

Project scopes consist of user scope and media scope. The details of scope are listed as follows:

1.4.1 User Scope

The target audience of this digital 3D animation is 7 to 11 years old. A primary school of respondents in Melaka will to take part in this project. The respondent's age in concrete operational stage and it is major turning point in cognitive development. If the target audience is adult, it is too late to root this concept in their mind.

1.4.2 Media Scope

The purpose of this animation is to teach children how to having healthy diet. The final output will be an animation in 8 minutes and is mp4 format. Mp4 format is a widely used format on devices.

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