

DUET DIPTERA

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SUPERVISOR DECLARATION

"I/We* declare that I/We* have read this thesis and according to our view this thesis is sufficient enough for the quality and scope purpose of getting the Bachelor Degree of Science in E-Commerce and Bachelor Degree of Science in Multimedia Technology."

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DECLARATION

The materials in this thesis are original expect for quotations, excerpts, summaries and references, which have been duly acknowledged.

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ABSTRACT

3D Animation Short-Story: DUET DIPTERA

In this project, our main purpose is to produce a 3D animation short-story is based on the value of the friendship that is portrayed by few characters. The characters that are portraying the value of friendship are between two flies. There the flies will show the meaning of friendship and how important is the value of friendship nowadays. This 3D animation short-story has been produced to bring moral values to the audience and tell audience about the imperative of the moral values. The target audience for our project is the ages from all youngsters to elderly. Besides this project is going to deliver the message of moral value to the respective audience and telling them that animation can also bring meaning of influence on the behaviour or the perspectives of the individual. The animation of the characters in the 3D animation short-story will portray everything and provide a better understanding on how the value of friendship is passed to each other. Besides emphasizing on the value of friendship, the project is a learning step to increase the productive of 3D animation short-story in local region. We know that animation is very important to us in life. Especially in 3D animation, it able us to deliver the message and it consider to be a great platform to influence people. Not only that, we will like to bring up the value of 3D animation short-story that it is important to be well-recognised from other. Hence, every single related matter is all under consideration to produce our 3D animation short-story which the title named is "Duet Diptera".



ABSTRAK

Dalam projek ini, tujuan utama kami adalah untuk menghasilkan sebuah animasi pendek cerita 3D adalah berdasarkan kepada nilai persahabatan yang digambarkan oleh beberapa watak-watak. Watak-watak yang akan menggambarkan nilai persahabatan adalah antara dua lalat. Perwatakan tersebut akan menunjukkan erti persahabatan dan betapa pentingnya nilai persahabatan pada masa kini. Ini animasi 3D pendek cerita telah dihasilkan untuk membawa nilai-nilai moral kepada penonton dan memberitahu penonton tentang kepentingan nilai-nilai moral. Penonton sasaran projek kami adalah peringkat umur dari semua anak muda ke orang tua. Selain projek ini akan menyampaikan mesej nilai moral kepada penonton masing-masing dan memberitahu mereka tentang wujud animasi yang juga boleh membawa makna pengaruh ke atas tingkah laku atau perspektif individu. Animasi watak-watak dalam animasi pendek cerita 3D akan menggambarkan segala-galanya dan memberikan pemahaman yang lebih baik mengenai bagaimana nilai persahabatan diluluskan antara satu sama lain. Selain menekankan nilai persahabatan, projek ini merupakan satu langkah untuk meningkatkan pembelajaran produktif animasi 3D pendek tingkat di wilayah setempat. Kita tahu bahawa animasi adalah sangat penting kepada kita dalam kehidupan. Terutamanya dalam animasi 3D, ia dapat menyampaikan mesej dan dianggap sebagai satu platform yang besar untuk mempengaruhi orang. Bukan itu sahaja, kita akan ingin membawa nilai animasi 3D pendek cerita bahawa ia adalah penting untuk menjadi yang sememangnya diiktiraf dari satu sama lain. Oleh itu, setiap perkara yang berkaitan tunggal semua di bawah pertimbangan untuk menghasilkan animasi pendek cerita 3D kami yang tajuk yang dinamakan adalah "DUET Diptera".



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CHAPTER 1

INTRODUCTION

1.1 Introduction

In the onset of the modern scientific world, the power of innovation on computer science has been a vital key to bring up the economics of a country. The innovation of computer has been further developed and going into acceleration mode. Animation can be based on 2 Dimensional (2D) and 3 Dimensional (3D). What is the relation between these two statements?

Animation can be found in much kind of platforms ranging from television, computer, mobile phone and other related gadgets. Animation has been a very convenience? To all animator all there that is using animation to produce entertainment for viewers around the world.

There are only two type of animation that is used in the animation industry which is the 2 Dimensional animation (2D) and the 3 Dimensional animations (3D). 2D animation figures are created on the computer using 2D bitmap graphic or created and edited using 2D vector graphic. This includes automated computerized version of traditional animation techniques. Software also can create 2D animation such as Adobe Flash and Microsoft PowerPoint. 3D animation is a more realistic and a more complicated animation to be produced 3D animation is an animation that is working on 3 Cartesian axes which is the X axes, Y axes, and Z axes. A mesh is a



geometric configuration that gives the visual appearance of form to a 3D object and 3D environment. The process of rigging is the animation of the 3D.

The main goal of our project is to produce an educational based 3D animation filled with valuable moral values that can be passed to the audience. The project title that we are going to present is called "Duet Diptera". This 3D short-story will be based on the value of the friendship between the main characters. A lot of researches have to be carefully done by us in order to take our step carefully in producing a valuable 3D animation which will bring good learning and moral values to the targeted audience.

1.2 Problem statement

- **Lack of high quality 3D animated short story production in UMSKAL**

3D animation has been taught in the course Multimedia Technology and due to the subject is complicated for students to master in terms of skills. This has cause the production of 3D animation to be poor in quality. Many of the students also has too many core subjects to learn and making those to left out with the importance of 3D animation skills and education. Pressure of core subjects and also limited time given to fulfil task of assignments has cause the production of 3D animation to be poor in quality. Besides, the basic education skill that has given to students has not creatively boost the exploration skills of students to make a good production of 3D animation.

- **The emphasize on value of friendship**

Friendship can be defined as a mutual affection between two or more people. Friendship is also a strong interpersonal bond that could not be break easily. A friendship is more important than an association because it include mutual sympathy, understanding, compassion, honesty, trust and love. Many people are



too engrossed with social media and thus causing them to have less face to face or close direct communication with their friends. Francis Bacon wrote an essay titled "Of Friendship". One of the famous quotes in his essay was "Age appears best in four things: old wood to burn, old wine to drink, old friends to trust and old authors to read."

- **Lack exploration and animating skills in 3D animation production**

Innovative and creativity brings successful idea in the making of 3D animation. The production of 3D animation in UMSKAL is still lack with the determined exploration spirit that helps them find out more ideas in making of a good 3D animation production. Besides, the animating skills that needed to be explore from tools to tools and also functions by functions has not completely utilise by the students of Multimedia Technology causing the insufficient of animating skills that required to make a good 3D animation production.

1.3 Project Goals

- **To produce a 3D animation short-story based on the value of the friendship while enhancing the 3D animation industry in Malaysia.**

People must really know how to treasure everything around them especially their friends who is always there to help when you are in trouble. Friendship is a very delicate thing to hold on but once it is broken, it will take a long time to heal up. In Malaysia, the production of 3D animation has been the main target to bring up the economics of Malaysia. As we can see that, 3D animation has not been famous in Malaysia until the 3D animation is produced in Malaysia which is the Upin & Ipin. Now, Malaysia has realized that they are lack behind and now beginning to fight and improve on the 3D animation so they can compete in the world.



1.4 Project Objectives

- **To produce a good quality 3D short-story animation.**

This production will be a futuristic animation that emphasize on the animating skills to make a smooth yet realistic feeling of 3D animation production. Besides, this story will be conducted without dialogue to enhance the power of sight in audience that can deliver them a powerful meaning of the story. There are many moral values that will be found in the presented 3D animation. Moral values that can be presented out are the mutual respect, care, trustworthy, sacrifice and love for each other. The character inside the story will show all this moral values and to symbolized themselves as a learning step for the targeted audience.

- **To show the value of friendship through the short-story**

This 3D animation will symbolized two Flies and show that they go through different kind of obstacles with each other. The two Flies enjoy the priceless of friendship to each other, willing to help each other when they are in trouble.

- **To explore the 3D animating skill in the production of 3D animation.**

In this making of project, we are made to produce a good quality animation that require good animating skills that needed to be explore and also tested. Besides, the Autodesk Maya software has many functions and tools that need to be explore and also master. By spending more effort, we would be able to achieve this objective by utilize more tools effectively and this indirectly enhance the animating skills of 3D animation in Maya software.



1.5 Project Scope

The main scope of the project is to produce a short-story based on 3D animation. The whole 3D animation short-story will be based on the value of friendship between the characters. Besides that, our target audience will be everyone ranging from young to elderly of all ages. This short-story are going to cover over the local market by targeting viewer in Malaysia but not in commercially around the world. Not only that, this 3D animation short-story is non-profitable and bringing up good moral value embedded in the short-story as a powerful impact for the target audience.

1.6 Target Audience

Everyone with any age category could be our target audience in this project.

1.7 Project Description

This project is a 3D animation project called "Duet Diptera". The main objective of this animation production is to deliver the friendship value to the audience and also help promote Malaysia produced animation. There are total of five phases in this project which is Planning and Collecting of Data, Data Analysis, Structure of Storyline and Design, Implementation and Testing and Evaluation. We will do a planning guide on how to collect our data and questionnaire. Then, the analysis of data where by the questionnaire will be analysed. The storyline will be made and character and environment will be designed according to the storyline. Implementation phase begin when we start modelling our characters and also animating them. Lastly, the testing and evaluation phase where by testing will be done by different users.



1.8 Project Methodology

The methodology that we have chosen to use is the making of this animation is systems development life cycle (SDLC). There are total of five phases for this cycle in the creation of a successful animation. Each phase is essential to be able to complete the animation project and the phases in SDLC have to complete their specific task to produce the project effectively and efficiently. Figure 1.1 will present a more specific view of development life cycle of the methodology process. The five phases are below:

- **Phase 1 : Planning and Collecting of Data**
- **Phase 2 : Data Analysis**
- **Phase 3 : Structure of Storyline and Design**
- **Phase 4 : Implementation**
- **Phase 5 : Testing and Evaluation**

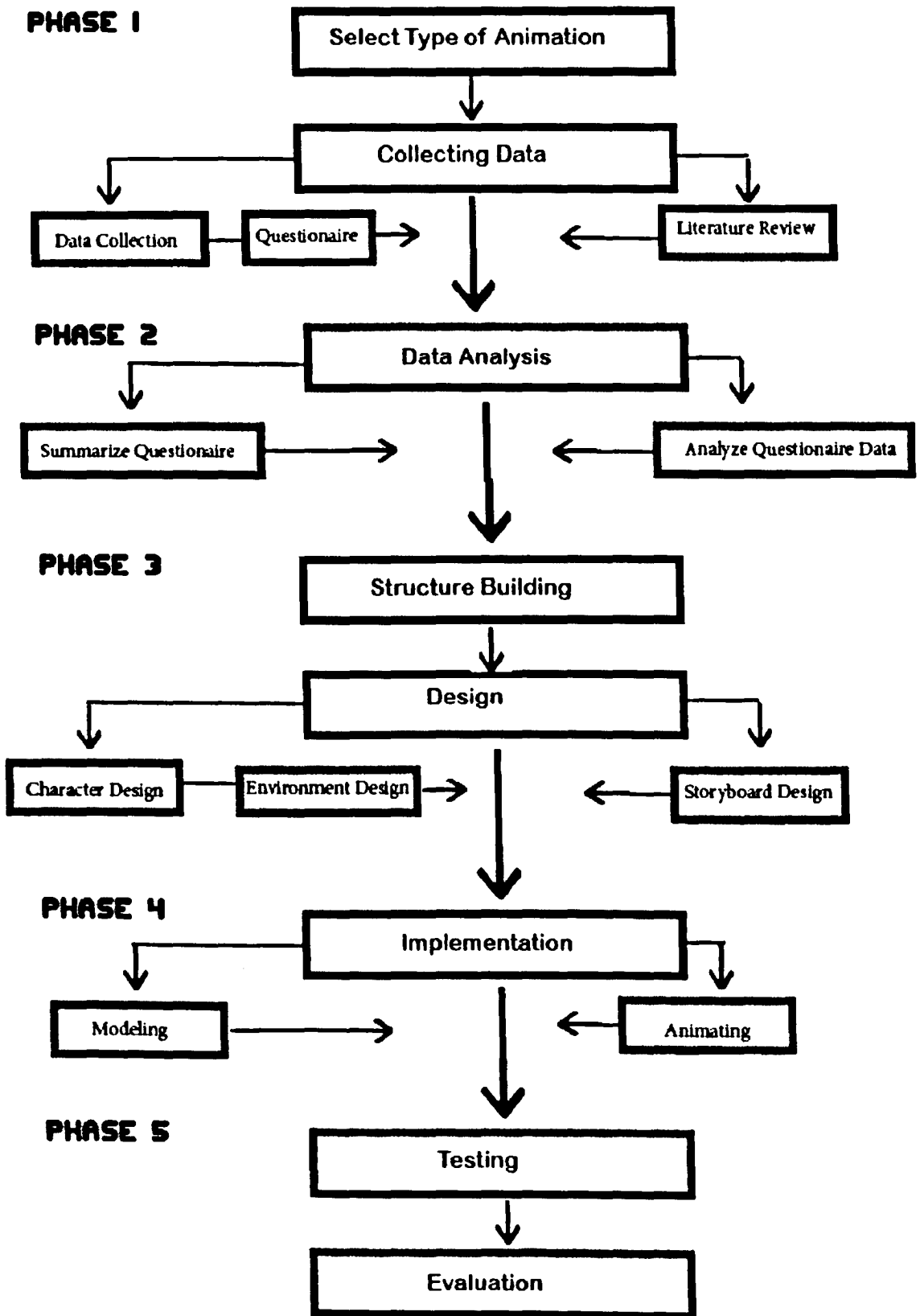


Figure 1.1: Methodology Process

Phase 5: Testing and Evaluation

Testing the animation will be the final stage for this project. Testing can be done by using different computers, different operating platforms and also different users. Lastly, audiences will be the one who evaluate our animation project based on attractiveness and effectiveness of the animation towards audiences.

1.9 Project Timeline

Produce out a Gantt chart

In this project 1, a Gantt chart is produced on how to organize the project 1 which to ensure that the project 1 will be completed within 14 weeks.

Project 1 starts from 9th September 2013 and estimated to be done on 30th December 2013.

Project 2 starts from 17th February 2014 and estimated to be done on 20th May 2014.

Please refer to Appendix A.

1.10 Report Structure Outline

This report consists of seven chapters:

Chapter 1 Introduction

Introduction is mainly to introduce the planning and how to manage the project such as the problem statement, goal, objectives, project scope, target audience, project description, project methodology, project timeline and report structure outline. There are all included in the introduction. The audience or the reader will get to know some rough idea what is all about the 3D short-story.

Chapter 2 Literature review

In literature review, it consist reviews about the background research of the project that we are producing. Reader can better understand what reviews have been done through the project.

Chapter 3 Analysis

Analysis is the analysis of the project feasibility and the requirement of the project. This particular chapter will identifies the requirement for the development of the project and the end-users will be able to give us feedback and response will be collected from the users to improve the project.

Chapter 4 Design Stage

In this particular stage, we will be able to identify the character and the environment to be modeled out and later to design with the suitable environment. A storyboard is stand by to help visualize the idea on what is going on the project and gives an overall view on the production

Chapter 5 Implementation

In this stage, the implementation is all about the modeling, animating, rendering and editing phase.

Chapter 6 Testing and evaluation

In this stage, we will run the process of testing on the project and see whether there is a mistake occurring during the testing and we can edit and patch up. It also consists of the evaluation of the product.



2.1.2 Background Research

In background research, we will briefly explain why we are using 3D animation as our medium to be delivered to the audience of all ages ranging from young to elderly. The message that we are delivering is the moral value of friendship to audience, and show the importance of the term friendship for every individual. The project will be a short-story 3D animation.

The character inside the short-story will express the every single value which represents the character and to be delivered as a message to the audience so they will be able to experience and treasure the value of friendship. "The use of animated technologies in the education of the students – is a well-known way to improve the cultural level, moral upbringing, and to form behaviour norms. From year to year various animated films become of great importance in the educational process, as they have many advantages over various moral instructions. This fact is well illustrated by the changes in the objectives and tasks of the system of moral education, the latter, in turn, require the innovative solutions, interesting methods of impact on the young minds, feelings, emotions and on the development of their creative thinking." (Ludmila Moskaleva & Elena Postynaya, July 2013, page 114)



2.1.3 How does animation influence human personality especially based on the moral value of friendship

Animation can be recognized as a medium to be delivered for the people. Animation is a very effective learning tool and often animator will use animation especially in 2D and 3D to design a character to represent human personality. Animation can also be used to portray character's personality same as human being, hence its ability to bring the moral value to be delivered to the targeted audience. "Graphics have been used since ancient times to portray things that are inherently spatiovisual, like maps and building plans. More recently, graphics have been used to portray things that are metaphorically spatiovisual, like graphs and organizational charts. The assumption is that graphics can facilitate comprehension, learning, memory, communication and inference." (Mireille Betrancourt, 2002, pg 1).

One of the most exciting forms of pictorial presentation is animation. Animation refers to a simulated motion picture depicting movement of drawn (or simulated) objects. The main features of this definition are as follows: (1) picture – an animation is a kind of pictorial representation; (2) motion –an animation depicts apparent movement; and (3) simulated – an animation consists of objects that are artificially created through drawing or some other simulation method. In contrast, video refers to a motion picture depicting movement of real objects. Similarly, an illustration is a static picture of drawn (or simulated) objects whereas a photo is a static picture of real objects." (Richard E.Mayer & Roxana Moreno, 2002, pg. 2).

Besides that, the trend visualization of animation can be part of the learning tool in providing the moral values to the targeted audience. "Animation has been used to show trends in multi-dimensional data. This technique has recently gained new prominence for presentations, most notably with Gapminder Trendalyzer. In Trendalyzer, animation together with interesting data and an engaging presenter



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