“DEPRESSION AWARENESS”: THE IMPACT OF SECONDARY MOTION IN 2D ANIMATION

AMNI SYAZANA BINTI NOR HISHAM

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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“DEPRESSION AWARENESS”: THE IMPACT OF SECONDARY MOTION IN 2D ANIMATION

AMNI SYAZANA BINTI NOR HISHAM

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Interactive Media) with Honours.

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2021

DECLARATION

I hereby declare that this project report entitled

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

STUDENT : _____ Date : 07/09/2021
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I hereby declare that I have read this project report and found this project report is sufficient in term of the scope and quality for the award of Bachelor of Computer Science (Interactive Media) with Honours.

SUPERVISOR : _____ Date : 12/09/2021
(DR. MOHD ADILI BIN NORASIKIN)

DEDICATION

To my beloved parents and family, who have always encouraged and supported me through my educational journey. Also, to my supervisor Dr. Mohd Adili Bin Norasikin, and all my friends who have guided, inspired, and helped me complete my project.

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I would like to thank Dr. Mohd Adili Bin Norasikin for giving assistant to complete this project successfully. Thank you for always giving guidance and advice until this project comes to an end.

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Lastly, to anyone that indirectly involved in this project, thank you for your help and cooperation.

ABSTRACT

This project is developed for Projek Sarjana Muda (PSM). It is a 2D Animation of Depression Awareness which gives some knowledge and encourages society aware of their mental state. This 2D animation will focus on implementing secondary motion in the development of the animation. The project aims to determine the significance of implementing the secondary action principle in 2D animation. Other than that, the audience can see how the secondary motion can affect the emotion or feel in animation. The target user of this project is students and public. This final year project is in the 2D animation domain. Animation principles were utilized in this development process.

ABSTRAK

Projek ini dibangunkan untuk Projek Sarjana Muda (PSM). Ini adalah Animasi 2D Kesedaran Depresi yang memberikan sedikit pengetahuan dan mendorong masyarakat menyedari keadaan mental mereka. Animasi 2D ini akan menumpukan pada pelaksanaan gerakan sekunder dalam penghasilan animasi. Tujuan projek ini adalah untuk menentukan kepentingan melaksanakan prinsip tindakan sekunder dalam animasi 2D. Selain itu, penonton dapat melihat bagaimana gerakan sekunder dapat mempengaruhi emosi atau perasaan yang berbeza dalam animasi. Pengguna sasaran projek ini adalah pelajar dan orang ramai. Projek tahun akhir ini berada dalam domain animasi 2D. Prinsip animasi digunakan dalam proses penghasilan ini.

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LIST OF ABBREVIATIONS

FYP	**-**	**Final Year Project**
PSM	**-**	**Projek Sarjana Muda**

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CHAPTER 1: INTRODUCTION

1.1 Introduction

A secondary action is a follow-up activity that occurs as a direct result of a primary action. It should never be a subordinate who dominates and takes over the principal action. A secondary action is present for support and brings the scene to life: it is the result of another movement. Interest is piqued when the main activity (independent motion) is combined with a secondary action (dependent motion). The significance of adding a secondary action to the primary action can give the sense of life by adding additional depth to the character's motion and making them appear more genuine and dramatic. It also lends the character's thoughts or actions more personality, making it easier to read. Secondary activities should never take precedence over the main topic of interest; otherwise, the viewer will be distracted from the most significant aspect of your shot. If the secondary action becomes essential than the primary, the action was most likely staged incorrectly for the scene or was never meant to be deemed a secondary action in the first place. They also create depth by emphasizing the character's actions. This principle comes in handy when you want to strengthen the notion or sensation you are trying to convey to your audience.

1.2 Problem Statement

Secondary action is one of the principles of animation. The major goal of these principles was to provide the impression that cartoon characters followed basic physics laws. Still, they also addressed more abstract topics like emotional timing and character appeal. Secondary action invigorates your shots and distinguishes you from a skilled animator to an appealing visual storyteller. While performance-driven animations are entertaining, they sometimes lack the expressiveness and complexity of hand-written results, which means without a secondary movement taken into consideration, the animation will still look stiff, unnatural, and robotic.

Secondary actions are designed to either complement and strengthen the main action or divert the spectator's attention to other activities, thus enhancing and solidifying the animation. Secondary motion is quite hard to implement because some excessive movement can take the attention from the main move. A character's facial expression is occasionally a secondary activity. When the main concept of action is communicated by body movement, the facial expression becomes secondary to the main concept. The concern is that it will never be noticed, rather than dominating the scene if this expression will animate or change. Before or after the move, the change must occur. A modification in the middle of a large motion will go unnoticed, resulting in the loss of value planned. It must also be staged in such a way that it is evident, though secondary.

1.3 Objectives

The following objectives guide this project:

1. To study the secondary motion in 2D animation.
2. To develop 2D animation by implementing the secondary motion in the project.
3. To evaluate the impact of secondary motion in 2D animation.

1.4 Project Scope

This project is to gives attention to the secondary action through 2D animation. The target user for this 2D animation project is student and public. The animation will be applied secondary motion to the character. This will determine the importance of secondary motion principles. The content of this animation is to convey detailed information about depression and signs of depression. This project provides an effective approach to the public to get the facts and accurate information to ensure that they know and are alert about depression.

1.5 Project significant

Through this animation, the audience also can determine the significance of the secondary action in animation. This project will provide an effective approach to the public to get accurate information to ensure that they know and are alert about depression. The public should be aware of their mental health state.

1.6 Conclusion

In conclusion, from this project, the audience can know the importance of secondary motion. This project will produce an interesting 2d animation to attract the audience to listen and understand every valuable knowledge. Besides, this project also will give awareness to society about depression awareness.

This chapter includes the introduction, project background, problem statement, objectives, research question, scope, and significance of the project. To build this 2D animation, we must know the scope, give measurable objectives, overcome the problem, and the most significant of this 2D animation. Moreover, chapter 2 will outline the methodology used for this research and conduct a literature review of related works.

CHAPTER 2: LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter explains the literature review and project process used to complete the development of this 2D animation. Previous studies and research from publishing materials such as case studies, technical documents, and an online library play a significant role in the literature review. The goal of a literature review is to look for, collect, analyze, and make conclusions from all the information that has been read and examined. The project methodology consists of five phases: literature review, requirement analysis, design, development, and testing.

2.2 Domain

2.2.1 Animation

By capturing sequential drawings, models, or even puppets, animation creates the illusion of movement in a sequence. In research from Maio (2021), our eyes can only retain an image for approximately 1/10 of a second. When numerous images emerge rapidly in succession, the brain combines them into a single moving image. On clear celluloid sheets, images are sketched or painted to be caught in traditional animation. While early cartoons exemplify this, most animated films today are created utilizing computer-generated graphics (CGI). The frame rate, or the number of consecutive images presented each second, is employed to create the illusion of smooth motion in these drawn, painted or computer-generated displays.

2.3 Literature Review

"Good secondary action energizes your shots and marks the difference between being a competent animator and an entertaining visual storyteller" (Koch, 2019). A secondary animation/motion is dependent on another, more active movement. When a character shakes their head, the primary motion is the head movement, while secondary motions include hair movement and a floppy hat movement. In the world of effects animation, there is a lot of secondary motion. According to (Plummer, 2021), By incorporating supplementary animations into your scene, you may enhance the visual experience of your main action/character. For instance, by incorporating impact particles, you can aid the audience in understanding the weight of an object. This is useful if you need to demonstrate that the mass of numerous items varies. The audience then applies their prior real-world experience to what you have presented.

In research from S Willett et al. (2017), secondary motion is important for all character animation styles. They focus specifically on 2D animation, where characters are composed of individual layers representing different parts such as head, limbs, and torso. To animate such characters, users may continually transform layers (e.g., via non-rigid warping) or swap out artwork for a given layer to significantly change its appearance (e.g., closed fist becomes an open hand). This style is used to create most motion graphics, popular modern cartoons, and all our examples. The research approach aims to improve the attraction of 2D animation by adding secondary motion.

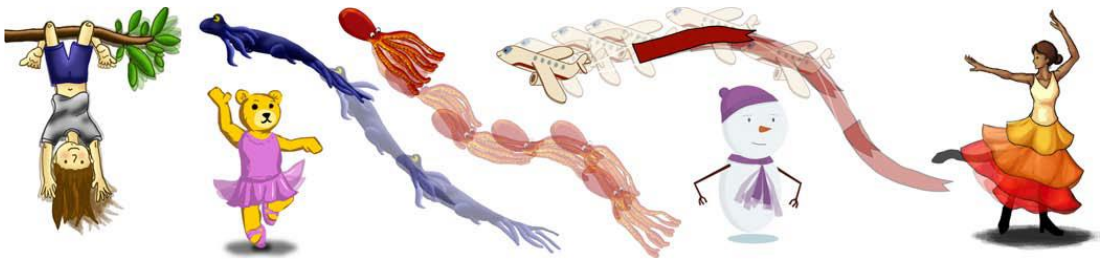

Figure 2.1 Characters exhibiting the secondary animation categories of swaying, jiggling, trailing motion, and respecting collisions. (S Willett et al., 2017)

In research from Jain et al. (2010), secondary motion refers to the movement of scene objects in reaction to the lead character's movement. It is frequently utilized to emphasize the character's emotion and personality through effects that appear to be driven by the motion. In real life, secondary acts are frequently taken for granted, but animators often overlook them. Some various guidelines and procedures should be fully considered to avoid disastrous effects when interfering with secondary actions. There are exemplary actions to carefully consider and plan while using facial emotions in a photo. When combined with a big movement, these small gestures may go unnoticed. As a result, rather than including this action throughout a larger movement, it is frequently preferable to include it at the start or finish so as not to detract from the principal action's dominance. In a more detailed explanation, there will be a circumstance in which the secondary action is the facial expression. The change in the expression must be staged so that it is visible to the audience, even if it is secondary. When the basis of action is told through body movement, the facial expression takes a back seat to the basis.

2.4 Project Methodology

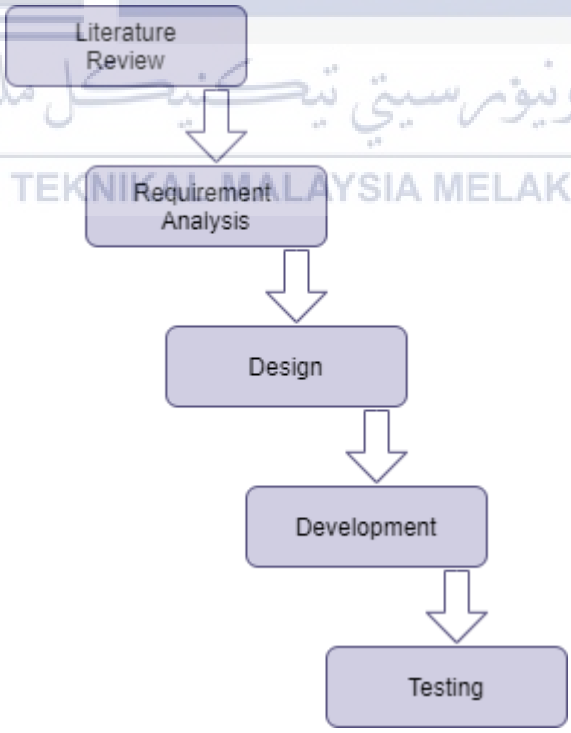

Figure 2.2 Project Methodology Phase

Figure 2.2 above shows the project methodology phase. This methodology will divide the 2D animation process into five phases, each of which will have several steps. The phases are as follows:

i. Literature Review

In this phase, it will describe the literature review on the secondary motion in 2D animation. An important role is played by previous studies and research from published materials such as case studies, technical documents, and an online library.

ii. Requirement Analysis

At this phase, the developer must determine the requirements, software, and hardware for the project. It necessitates a thorough examination of the components that must be included in the animation.

iii. Design

This section describes the storyboard, character design, and script, which are all important preliminary designs. The outputs from the analysis phase are used in the design phase to determine strategies for developing this 2D animation. The actions involved in the design phase are designing the animation's conceptual model and flowchart. The developer must create a conceptual model to determine how the animation's character or model will appear.

iv. Development

The development phase is the stage of project development during which all procedures are based on flow charts and storyboards to ensure a successful implementation. The designed criteria are based on the information gathered during the design phase. In this phase, the developer will proceed to the development of the creating character and animation.

v. Testing

In this phase, a formative evaluation will be carried out to see if the quality of the learning resources meets the standards outlined in the Design phase. The testing step is carried out to see if the animation met the project's objectives.

2.5 Project Requirement

Software and hardware are required to develop an animation project. Because they are intertwined, software and hardware requirements are important. A good, finished product will result from the combination of software and hardware.

2.5.1 Software Requirement

The software needed to develop this 2D animation project are as follows:

i. Adobe Illustrator
ii. Adobe Premiere Pro Cc
iii. Adobe After Effects CC
iv. Adobe Media Encore CC
v. Adobe Animate
vi. Microsoft Word

2.5.2 Hardware Requirement

The hardware needed to develop this 2D animation project are as follows:

i. Personal Laptop
ii. Mouse
iii. Drawing pad