

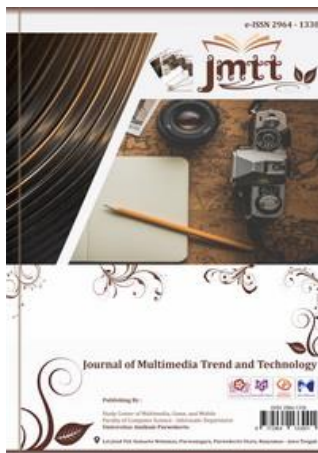
2-Dimensional Digital Animation Model for Public Health Socialization Assets

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ABSTRACT

Health is a very important aspect of human life. Human health will ensure that their lives continue to run well in everyday life in society. Currently, education about public health has been carried out in many ways by health agencies, from education by providing direct counseling to counseling using digital technology. However, not all health agencies have carried out health education through digital technology, one of which is the health agency at the Kaliwadas Community Health Center, where the agency has a problem where the staff at the agency have human data source competency and is still lacking competent in creating health education content for the public. This hampers public health education. The aim of this research is to create a digital content template to help simplify and speed up the production of health education content at the Kaliwadas Community Health Center. The method in this research uses the waterfall method which takes Sayanto as a reference, where this method consists of 3 stages, namely pre-production, production and post-production.

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INTRODUCTION

Health is important because it plays an important role in all aspects of human life. According to law number 36 of 2009 concerning health, health is a healthy state, both physically, mentally, spiritually, and socially which allows everyone to live productively socially and economically (Republic of Indonesia's Department of Health, 2009). The definition of health according to WHO (World Health Organization) is a condition of physical, mental, and social well-being and not merely the absence of disease or disability [1]. According to the classical theory of H. L Bloom, there are 4 factors that influence the degree of public health successively, namely lifestyle, environment (social, economic, political, cultural), health services, and genetic factors (Ministry of Health of the Republic of Indonesia, 2018). At present health services in Indonesia have been very developed in terms of facilities where there are already many hospitals to community health centers [2].

Digital technology is an information technology that prioritizes activities carried out digitally rather than using human input. However, it tends to be an operating system that is fully automated and sophisticated with a computerized system/format that can be read by a computer. This technological development has brought changes to the quality and efficiency of data capacity that is created and sent, such as; the images are getting clearer due to better quality, more efficient capacities and faster shipping processes. The shift from analog to digital has changed and threatened the existence of print media a lot. Most print media subscribers have switched to online technology which is more flexible and can read the latest information anytime and anywhere [3].

Digital media is information shared through digital devices or layers. Basically, digital media is any form of media that relies on electronic devices for creation, distribution, display, and storage. The basic concept of digital media, namely the use of digital technology in communication and conveying information. Digital media are digital tools that can be designed, created, applied, modified, and utilized on digital electronic devices or similar which can be used as messengers to people who are given messages in learning activities [4]. Forms of digital media can be created, modified, and distributed via electronic devices. Commonly used digital media are software, video games, videos, websites, social media, and online advertising. Digital media is also understood as information shared via digital devices or screens [5].

Digital media has become a new culture, all groups can enjoy various digital media information and entertainment ranging from political, sports, economic, educational, social, and cultural information to various entertainment [6]. Digital media has become a new culture, all groups can enjoy various digital media information and entertainment ranging from political, sports, economic, educational, social, and cultural information to various entertainment. [7].

Education is a process of learning activities for each individual or group that has the goal of improving the quality of mindset and knowledge and developing the potential of each individual or group. This educational process in everyday life is better known as the learning process. Education is a learning process for those who do not know to know, education can be obtained in formal, non-formal and informal learning [8]. Using animation as a technology-based learning medium to increase student learning motivation. Animation has been recognized as an effective tool for enriching students' learning experiences through visual representation. The uniqueness of animation lies in its ability to convey information visually by combining elements of motion, color and sound to create an interesting and memorable learning experience. [9].

Assets are used as materials or requirements for designing an application or game in the form of objects. In other words, the assets are aspects of an application that will be referenced by several components themselves as supporting the needs of an application.

[10]. Currently, education about health has been carried out both directly and indirectly by various health agencies in Indonesia, one of which is the "Puskesmas" which educates about health through various media, one of the media that is currently widely used is social media by creating digital content about health. Social media education about health will be more effective because it can be accessed by many people. problems in digitally educating the public about health. This problem is caused by human resources who are still not competent in creating educational digital content.

Based on the background above, the author is working on 2D Asset Digital Media for public health in the form of animation with the hope of helping create digital health education content for the community.

METHOD

In solving existing problems, we use a sequential solution framework flow. Then the method we use is the MDLC stages including Pre Production, Production and Post Production. For more details, see Figure 1 as follows:

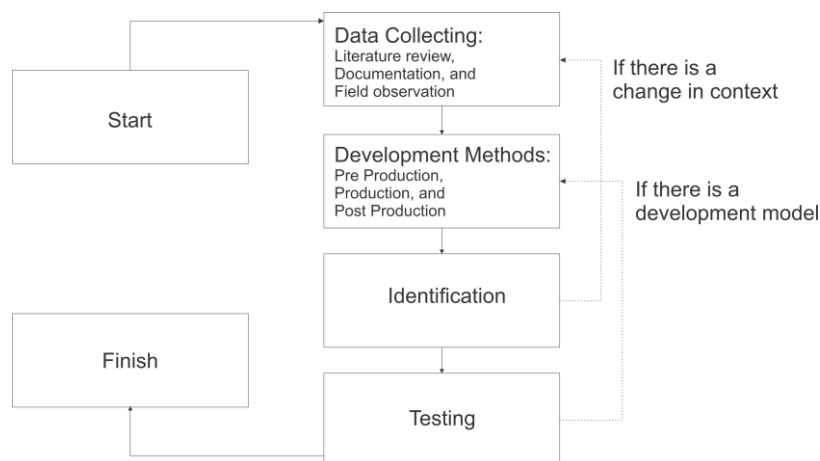


Figure 1, Settlement Flow.

The development method in this research uses pre-production, production, and post-production [11]. The Pre-Production Stage is the stage where preparations are carried out before production takes place. In this stage, the researcher carries out several stages or processes such as analyzing device requirements, making storyboards, and collecting materials. At the production stage in this research, the material creation and asset creation stages were carried out by editing in the after-effects application. Whereas at the production stage in this study, rendering was carried out, namely the unification of all compositions and sounds so that everything became one and not fragmented [12].

The use of testing in this study is intended to determine whether the 2D assets in the form of animation are as required. For testing, there are 2 tests, namely alpha testing and beta testing and project rendering testing. Alpha testing is carried out by seeing whether the results obtained are in accordance with what was planned. Meanwhile, beta testing was carried out by distributing questionnaires to workers at the Kaliwadas Health Center and students with a minimum of 30 respondents and then calculating whether the presentation of the questionnaire results was obtained. Rendering testing is done by rendering each template 3 times with the resulting video resolution of 1920x1080 pixels with 30 frames per second [13].

RESULT

In this research, problem identification is carried out which includes problem formulation on how to create digital media assets or templates for 2D content in the form of animations about public health in order to simplify and speed up the creation of digital content about public health. The aim of this research is to create digital assets or templates for 2D content in animated form to speed up and simplify the creation of public health education content. The system development method consists of several processes, namely pre-production, production, and post-production. The following are the results of each stage of development.

1. Pre-Production

This stage requires several steps, this requires several steps to make it easier to work on:

- The equipment requirement analysis referred to here refers to the requirements needed in designing assets, including the hardware and software used in the entire process.
- Making storyboards aims to clearly visualize the concept of assets or templates in this study, making it easier to determine the techniques to be used in each step of making assets or templates.
- Material collection is the stage of collecting all the components needed to make an asset, the following is a list of materials needed in this research.

2. Production

The production stage in this stage is animation. Animating is the process of creating the illusion of movement in a static image or object by using a series of different images or objects in succession. In animation, a series of different images or objects are arranged quickly to create the illusion of smooth movement. The process of animating involves creating or gradually moving objects from one position to another, thus creating changes and transitions that are seen as movement. In the digital era, animating can be done with the help of software such as Adobe After Effects, Blender, or Autodesk. In each case, the goal of animating is to bring an image or object to life and create a dynamic and engaging visual experience for the viewer.

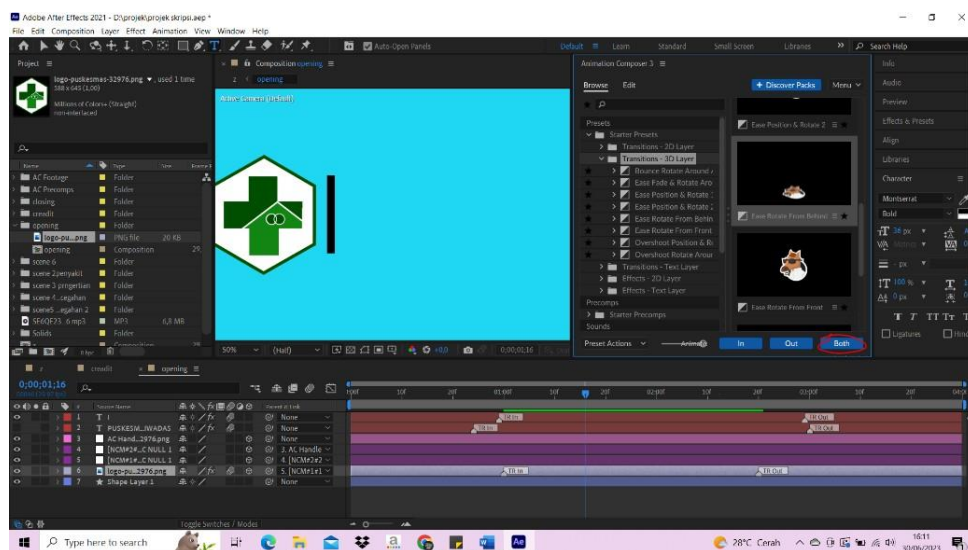


Figure 2, Placement of Animation Assets.

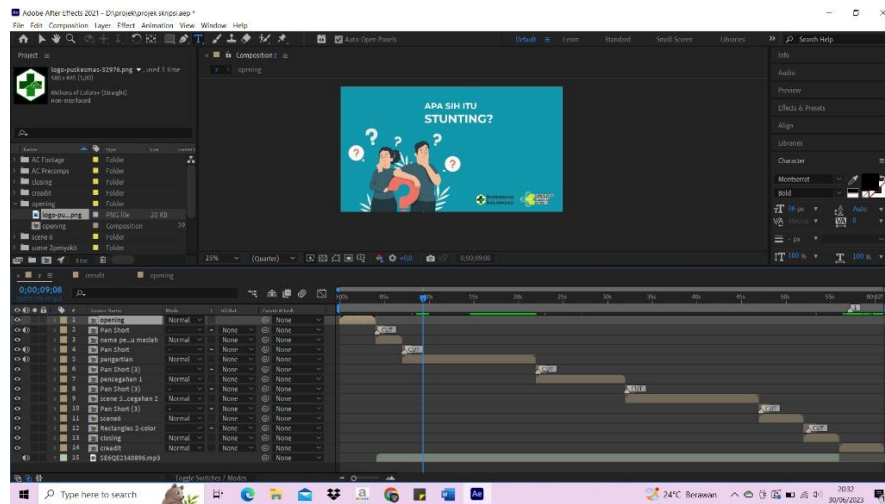


Figure 3 Placement of all animation assets.

3. Testing

Testing is an important process to ensure the quality, suitability, and reliability of a product or system before they are used and introduced. After the asset created has been finished, the next stage is to carry out Alpha testing and Beta testing [14]. User acceptance assessment, also known as beta testing, is a form of testing that emphasizes the readiness of an application or product before it is adopted by the general public.

The test results are directly applied to the general public as a social experiment. This socialization is carried out for approximately 1 to 2 days, with the user acceptance test evaluation model. The following results are obtained:

Table 1, Hasil penilaian dan tanggapan oleh masyarakat langsung.

Days	Theme	Participants	Assesment			Responsibility
			Good	Enough	Bad	
1	General health	20	80%	18%	2%	Very good delivery and easy to understand.
2	Environmental cleanliness pattern	20	70%	20%	10%	Submission is good and needs to be presented in an environment that suits each culture.
3	Prevention and Self-Treatment	25	80%	18%	2%	Submission is very good and can be practiced by all circles of the general public.

4. Post Production

Render testing was carried out to see the time needed to create educational content about public health. The test results can be seen in Figure 4 below which displays the results of the template rendering test.



Figure 4 Testing animation after rendering.

CONCLUTIONS

The conclusion from the above research with the theme "DIGITAL MEDIA CONTENT 2D ASSETS FOR PUBLIC HEALTH IN THE FORM OF ANIMATION" can design digital media content 2D assets for animation-based public health successfully, in which there are three ready-to-use templates to make it easier and speed up the creation of health education content public. From the results of the alpha test it was in accordance with what was desired, while the beta test which was carried out by distributing questionnaires obtained a percentage of 86.74% which was categorized in the "very good" category, while for the average rendering time templates 1 to 3 had a long time 224.8 seconds or about 3 minutes 44.8 seconds.

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