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SHORT 2D ANIMATION FOR INCREASING DEPRESSION AWARENESS

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ABSTRACT

Depression is a mental health disorder that affects a person's mood which is characterized by sadness, hopelessness, stressed and loss of interest in doing any activity. This condition has a very negative impact on a person thoughts, feelings and mental health. Although depression is a mental health disorder that can be treated, unfortunately there is very little public awareness to recognize the symptoms of depression. Which causes a lot of people ignoring depression and leaving it without treatment or consultation with experts. Untreated depression can be life threatening. The number of deaths due to suicide each year can reach 800,000 to 1,000,000 victims and 80% of these deaths are caused by depression. The high mortality rate due to depression reflects the low public awareness of mental health disorders. With this problem, the author wants to increase public awareness and concern for depression through a 2D animated video. In designing this 2D animation, the author uses some software assistance, namely Procreate and Capcut. By using the Multimedia Cycle Development (MDLC) method to assist the animation design process as well as data collection techniques by conducting interviews and literature studies. The final result of this research is a 2D animation with a duration of 2 minutes and 49 seconds with the title "Candle: A Short Animation About Depression" which is distributed to the public through the Youtube platform.

Keywords: *Mental Health Disorder, Depression, Multimedia Cycle Development (MDLC), 2D Animation*

INTRODUCTION

One of the problems that is developing in Indonesia today is the lack of public awareness towards mental health issue such as depression. Based on research results from Basic Health Research (Riskesdas) in 2013, it was shown that the number of sufferers of emotional mental health disorders such as depression for ages 15 years and over had reached 6% or around 14 million sufferers. Meanwhile, the number of sufferers of severe mental disorders has reached 400,000 people

Depression is one of the most common types of mental health disorders in the world (Prastiwi, 2018).

Depression affects the sufferer's feelings, mind and actions negatively by causing a persistent feelings of sadness and loss of interest to carrying out daily activities (Nuriyah et al., 2021). Because of depression, many things are harmed by sufferers such as disruption of work functions, social functions and the most dangerous situation is the

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emergence of thoughts to committing suicide or attempting suicide (Saputri & Rahayu, 2020).

Media that is used to explain about depression is still not widely found. Therefore, the author is interested in raising the awareness of depression in the form of two-dimensional animation. Animation in the form of audio-visual has aesthetic appeal and the message conveyed will be more easily understood by the audience. On the other hand, animation has more value to convey the message. This is because animation has complete elements such as audio and visual.

Since 1950 animation has begun to become part of the secondary needs for teenagers and the general public in Indonesia (Yasa et al., 2019). Animation is a process of displaying a bunch of images objects, so that the displayed image will appear alive and have its own characteristic (Kadek et al., 2020). Besides that, animation is able to give the audience a more imaginative visualization, Because it can provide information that is more easily accepted, animation is a great way to convey a message.

The method that will be used in this research is the Multimedia Development Cycle (MDLC) method which consists of six stages, namely concept, design, collecting material, assembly, testing and distribution *distribution* (Astuti et al., 2019). Based on the description of introduction above, the author is interested in designing a 2D animation containing the theme of depression with the title "**2D Short Animation For Increasing Depression Awareness**".

PROPOSED INNOVATION

The implementation of the research "Short 2D Animation for Increasing Depression Awareness" is based on several previous studies, such as:

Research by (L.Chindany & Mansoor, 2020) is an applied research entitled Visual Storytelling Structure of Sexual Harassment Educational Animation "Ku Jaga Diriku".

This study aims to analyze the structure of visual storytelling to determine the suitability of visual sentences with verbal information. The method used is descriptive qualitative data analysis based on Primadi Zpalanzani's Visual Storytelling and Primadi Tabrani's Visual Language. The result of this study concludes that visual storytelling in animation consists of tangible, intangible and sequence aspects that build stories with educational messages through visual and audio. Visualization using 2D cartoon style makes it easier for people to process information through images. Visuals in animation can explain textual messages clearly, concretely and universally. The product of this research is a 2D animation with a duration 3 minutes 8 seconds which has been uploaded to Youtube.

The research by (Anggara et al., 2020) is an applied research entitled The Process Of Making 2D Animated Film "Pedanda Baka". The purpose of this research is to convey inspirational stories full of morals to the wider community. The research method used by the author is Film Production Stages. This study also uses primary data collection such

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as direct interview. The visual design of this animation is done by using Procreate 4.2.5 application. The process of making the film using the Adobe After Effects 2018 application with a 2-dimensional visual aspect and the type of character used is a fable-style animated character. The product of this research is a 2D animation with 16:9 aspect ratio and uses 24fps.

The research by (J. Putra, 2020) is an applied research entitled Designing 3D Animation of Airport Simulation Using 3D MAX Software. The purpose of this research is to design a 3D animated video about the Taman Kota as an entertainment and also as a promotional media. The research method used is the Multimedia Development Cycle (MDLC) method which consists of concept, design, material collecting, assembly, testing and distribution. In the process of producing the animation, this research uses 3D Studio Max as the main application for designing 3 dimensional object, which is assisted by Lumion application to render the animation and will be refined again using Adobe Premiere Pro to create a maximum results. The product of this research is a 3D animation with 1280x720px resolution, 24 fps in mp4 format which has been published to Youtube. Research by (Amalia, 2019) is an applied research entitled Designing 2D Animation as an Educational Media About Growing Confidence for Deaf Adolescents. The purpose of this study was to design an effective animation to increase selfconfidence in deaf adolescents. The concept chosen is linear short film with 2D animation technique

because it is considered capable of persuading teenagers with emotional stories to motivate and generate self-confidence. This research data has been collected through literature studies, interviews, observation and questionnaires. The author also consults with experts in the fields of psychology and 2D animation. The research flow used is Stage of Film Production which consisting of Preproduction, Production and Post-production. The animation will be designed using 2D animation techniques with semi-realistic and explorative visual styles to suit the interest of audience target. The product of this research is a 2D animated video with the main character being deaf that will be shown in special schools (SLB).

The research by (Pratama et al., 2019) is an applied research entitled Internal Monologue Technique in the Animated Film "Bad Hair Day". This design has the topic of bullying with a story of a little girl who is bullied because she has a different physical appearance from other friends, so she feels depressed and sad. Therefore, the purpose of this design is to create a two-dimensional animation that discusses bullying and persuades the audience to care for each other, especially the victims of bullying. The process of making this animation uses Toonboom Harmony 10.3 by using an internal monologue technique. The product of this research is a 2D animation with a duration of 5 minutes and a resolution of 1920x1080 px24 fps in mp4 format.

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METHODS Research Flow

To make the animated film "Short Animation for Increasing Depression Awareness", this research flow is used for explaining the stages that author takes in designing this 2D animation.

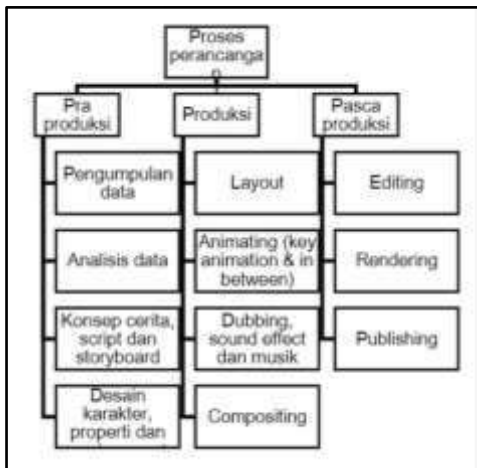


Figure 1. Research Flow

(Source: Thifala et al., 2021) 1.

Pre-Production

At this stage, the authors collect data related to the topic of this research by conducting interviews and literature study. Then the author will conduct an analysis by studying and understanding the data that has been obtained. After that, the author will start making the concept of the story and determine the ideas from the animation into a script which is then converted into a storyboard. Furthermore, character designs will be carried out according to the concept of the story and other assets.

2. Production

At this stage, the author begins by determining the animation layout, after that the author begins the process of

making animation by using the Procreate application and based on frame by frame technique. After the animating process is complete and all the images are combined into one clip, the author adds background music with relaxed and slow tone.

3. Post-Production

At this stage, the author starts editing by adjusting light, contrast and adding filters and effects to the animated video. After the editing process is complete, all the animation elements will be rendered into one. The final product of this research is a 2D animation with a ratio of 04:06 which will be uploaded to the Youtube platform.

Research Method

In the design of this research, the author has developed an animation video design. The development method used in this study refers to the Multimedia Development Cycle (MDLC) method.

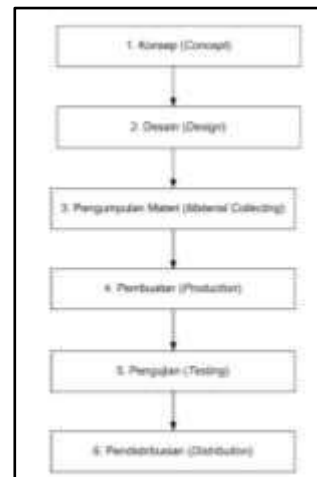


Figure 2. Research Method (Source: J. Putra, 2020)

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Based on the development model above, the animation design process to the end is structured as below:

1. Concept

The initial stage of this development method is to determine the concept. At this stage the author begins to create a video concept starting from the title, storyline, to the formation of characters from animation, this will be a benchmark in the process of making animated videos. This animation was designed with the aim of spreading public awareness of mental health disorders such as depression. The concept that has been chosen is a main character from a candle, the author uses the light from the candle as a symbol of someone's spirit to live, which supports the story line from the beginning to the end. And this animation is made without conversation voice between characters, the delivery of messages is done in text form and background music.

2. Design

At the design stage, it begins with the process of making a storyboard. The storyboard here will be used as an illustration of the 2D animation video that will be created, so that the animation making process can be easier.

After that, the author designs a character in the form of a candle according to the concept of the story, the author is using the Procreate application to sketch the character and then it'll be refined as an asset.



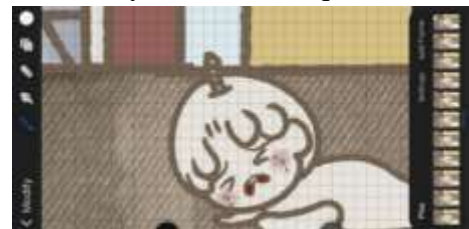
Figure 3. Character Sketch

3. Material Collecting

At this stage, authors collect materials that can support the animation design process. Starting from searching for theories regarding mental health disorders through trusted sources such as HaloDoc and also by watching 2D animated videos with the same topic as this research on the Youtube platform. Author also collects materials in the form of pictures/photos of characters that can support the animation design process and can be used as a reference for the animation-making process.

4. Assembly

At this stage, the animation process is carried out according to the concept and storyboard that has been made. The first activity done is the animating process using the Procreate application. The author uses 1080px video resolution, 04:03 Aspect Ratio, 24 frames/second and frame by frame techniques.



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Figure 4. Animating Process

After the animating process is complete, it is followed by the process of merging all scenes from animation into one video sequentially using the Capcut application. After that, the animation would be edited which is done by adding some additional transition, effects and filters in several scenes to strengthen the appearance of the animation.



Figure 4. Merging Process



Figure 5. Editing Process

LIMITATIONS

Based on the introduction and problem formulation described which contains board discussion. In order for this research to be more focused, author wants to limit the problems of designing this 2D animated video as a media for increasing awareness of mental health such as depression to the people of Indonesia.

APPLICATION INSTRUMENT DESIGN

The application instruments used in designing 2D animation are divided into 2 tools.

1. Software
 - a. Procreate v4.0.5
Used for the process of making animation
 - b. Capcut v5.2.0
Used for editing
2. Hardware
 - a. iPhone 12 Pro Max
 - b. Laptop ASUS serial X456URK with the following specifications of processor *Intel® Core™ i5-7200U* CPU @1.50 GHz (4CPUs), ~2.7 GHz, RAM 8GB, operating system Windows 10 64-bit and disk drive HDD Toshiba 1 GB.

RESULT AND DISCUSSION

Implementation

The final result obtained from this research is a 2-dimensional animated video entitled "Candle: An Animated Short Film about Depression" with a duration of 02:49 minutes, 4:3 aspect ratio and 1080p resolution. With the concept based on the following list:

1. Scene 1

The first scene starts with a ringing alarm from a phone, then the main character wakes up from his sleep and walks to the bathroom.



Figure 6. Ringing Alarm

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2. Scene 2

In the second scene, the main character that is a candle are shown standing in front of a mirror with a gloomy face, and then he starts cleansing his face. Because the concept of the main character is a candle, so he can melt his face. After that, he was seen drawing a smile on his face.



Figure 7. Main Character

3. Scene 3

In this scene, the main character is shown walking at the streets, then he meets a little child who is running and falls in front of him. The little boy started to cry and the main character calmed the little boy.



Figure 8. Walking in the street



Figure 9. Little child crying

4. Scene 4

This scene shows the main character studying and hanging out with his friends. This scene also features several brief snippets in each clip regarding the main character's "inner thoughts", these short snippets intend to show the original feelings felt by the main character at that moment.



Figure 10. Main Character Studying



Figure 11. Main Character's Inner Thoughts

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5. Scene 5

In this scene, the main character has returned home. Here, it is shown that the main character melts quickly, followed by the words “pills” that appear continuously. This scene shows that the main character does not show the same side when he is at home and in public because of his mental health. Then followed by a close-up scene of the main character taking medicine and falling asleep.



Figure 12. Main Character Melting



Figure 13. Main Character Consuming Pills

6. Scene 6

In this scene, it is shown that the main character has woken up from his sleep, then he started to had some flashbacks about his daily life, where he has to hide his sadness in the public. Then the main character felt very tired and he started crying.



Figure 14. Crying Main Character

7. Scene 7

This scene starts from a dark screen, then the main character's cellphone lights up because there is a chat from a friend asking why the main character keeps skipping school. Here, the main character wants to tell his true state that his mental illness is getting worse, but he is reminded of an unpleasant past incident for him. The main character then lies about his true situation to his friend and says that he is fine.



Figure 15. Chat Room

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Figure 16. Flashback Scenes

8. Scene 8

The last scene of this animation, starting from a dark screen then slowly shown that the main character is lying on the floor melted with various other objects such as scattered drugs. Then followed by a close-up scene of the candlelight of the main character slowly dying. Followed by the last quote that the author wants to convey, the story is finished.



Figure 17. Dying Main Character



Figure 18. Candle Light

Testing

At the testing stage, the animation that has been rendered will be run again to check whether there are errors in the animation object, placement and movement of characters before finally entering the final stage, namely the Distribution stage.

Table 1. Testing Results

| No | Actions | Results | |
|----|--|---------|----|
| | | Yes | No |
| 1 | Checking the suitability of the animated storyline with the storyboard | v | |
| 2 | Animation coloring check | v | |
| 3 | Animation character check | v | |
| 4 | Animation background check | v | |
| 5 | Sound and music testing | v | |
| 6 | Checking the use of language in animation | v | |
| 7 | Check the suitability of filters and animation effects | v | |

Distribution

The final result is a 2D animation video with a duration of 02:48 minutes with a size of 930 mb. The results of this video will be published through the YouTube platform so that it can be accessed by anyone, and the author can also get feedback from users when viewing the animation.

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Figure 19. Video Distributed

Implication

The implementation of this project has achieved the author's goal to provide an example of an illustration of the daily life of people who have depression. In addition, this animation can also be redistributed by the audience, so that it can increase public awareness of depression.

CONCLUSION

The conclusions from the results of the study entitled "Short 2D Animation For Increasing Depression Awareness" are as below:

1. The animation design with the title "Short 2D Animation For Increasing Depression Awareness" is designed according to the concept by using a unique character but relevant to the topic so that it looks more interesting and the message conveyed will be easier to understand.
2. The design of this 2D animation uses the Multimedia Development Cycle (MDLC) method, where this animation is processed through 6 stages, namely: Concept, Design, Material Collecting, Assembly, Testing and Distribution.
3. The process of making this animated video are supported by some software assistance, such as Procreate as a tool for

making animation by using frame by frame technique and Capcut as an editing tool.

4. With this 2D animated video as a media for spreading awareness, it is hoped that the public can be educated and not to underestimate mental health disorders, especially depression.

FUTURE WORK

In making this promotional video, the author realizes that the results obtained still have many shortcomings and are still far from perfect. Therefore, suggestions that can be used from this research for the future are as follows:

1. Use reference images to make it easier to draw a animation move and character pose.
2. Understanding the animation method is not enough to create a quality movement, the role of the 12 principles in animation is needed.

REFERENCE

- Ainiyah, N. (2018). Remaja Millennial dan Media Sosial: Media Sosial Sebagai Media Informasi Pendidikan Bagi Remaja Millennial. *Jurnal Pendidikan Islam Indonesia*, 2(2), 221–236. <https://doi.org/10.35316/jpii.v2i2.76>
- Amalia, S. (2019). Perancangan Animasi 2D Sebagai Media Edukasi Tentang Menumbuhkan Rasa Percaya Diri Untuk Remaja Tunarungu. *Wimba : Jurnal Komunikasi Visual*, 10(2), 107–120. <https://doi.org/10.5614/jkvw.2019.10.2.4>

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Innovation, Education, and Social Science (CoMBInES)
Taichung, Taiwan 3-6 March, 2022**

- Anggara, I. G. A. S., Santosa, H., & Udayana, A. A. G. B. (2020). Proses Pembuatan Film Animasi 2D “Pedanda Baka.” *Jurnal Segara Widya ISI Denpasar*, 8(1), 10–19.
- Astuti, I. A., Harwanto, A., & Hidayat, T. (2019). Pengembangan Media Interaktif Pengenalan Sistem Tata Surya Menggunakan Framework MDLC. *Eksplora Informatika*, 8(2), 158–166. <https://doi.org/10.30864/eksplora.v8i2.220>
- Ilmiani, A. M., Ahmadi, A., Rahman, N. F., & Rahmah, Y. (2020). Multimedia Interaktif untuk Mengatasi Problematika Pembelajaran Bahasa Arab. *Al-Ta'rib : Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya*, 8(1), 17–32. <https://doi.org/10.23971/altarib.v8i1.1902>
- Kadek, N., Ari, T., Sindu, I. G. P., Windu, I. M., & Kesiman, A. (2020). *Adaptasi Cerita Pahlawan "Riwayat Hidup Mr. I Gusti Ketut Pudja" Dalam Bentuk Animasi 2D*. 9, 185–192.
- L.Chindany, A., & Mansoor, A. Z. (2020). *Pelecehan Seksual “Ku Jaga Diriku.”*
- Nuriyah, L. I., Mandagi, A. M., Pratiwi, X. I., Epidemiologi, D., Kependudukan, B., Kesehatan, P., & Masyarakat, F. K. (2021). *Remaja Genetic and Psychological Relationship with the Depression Event in Adolescents Pendahuluan Depresi adalah salah satu jenis gangguan mental yang paling umum terjadi di dunia (World Health Organization , 2015). Depresi menjadi penyakit yang secara. 2655, 26–36.*
- Pratiwi, M. D. (2018). *Perancangan Video Animasi Explainer Bertema Kesehatan Mental Sebagai Media Pengenalan Gangguan Bipolar kepada Usia 18-25 Tahun.* <http://repository.its.ac.id/59297/>
- Pratama, D. M., Tanto, H., & Atmani, A. K. P. (2019). Teknik Monolog Internal Dalam Film Animasi 2D “Bad Hair Day.” *Journal of Animation and Games Studies*, 5(2), 153–174. <https://doi.org/10.24821/jags.v5i2.3126>
- Puspitarini, D. S., & Nuraeni, R. (2019). Pemanfaatan Media Sosial Sebagai Media Promosi (Studi Deskriptif pada Happy Go Lucky House). *Jurnal Common*, 3(1), 71–80. <https://ojs.unikom.ac.id/index.php/common/article/view/1950>
- Putra, J. (2020). Perancangan Animasi 3D Simulasi Bandar Udara Menggunakan Software 3DS Max. *Jurnal Ilmiah Core IT: Community Research ...*, 8(2), 18–24. <http://www.ijcoreit.org/index.php/coreit/article/view/188>
- Putra, R. R., & Salim, T. A. (2021). Implementasi Elemen Teknologi Multimedia pada Akun Instagram “@ Petualangan Menuju Sesuatu.” ... *Ilmu Informasi, Perpustakaan, Dan Kearsipan*, 23, 95–107. <http://jipk.ui.ac.id/index.php/jipk/article/view/283>
- Rahmalita, O. A., & Suminto, M. (2018). *Film Animasi 2D Dengan Teknik Rotoscope*. 4(2), 147–182.
- Sanuaka, A. A., Ariawan, K. U., & Sutaya, W. (2017). Pengembangan Media Pembelajaran Electronic Book (E-Book) Interaktif Multimedia Dalam Mata Pelajaran Teknik Animasi 3D Dan Teknik Animasi 2D Di Jurusan Multimedia Smk Negeri 3 Singaraja. *Jurnal Pendidikan Teknik Elektro Undiksha*, 6(2). <https://doi.org/10.23887/jjpte.v6i2.20234>

**The 2nd Conference on Management, Business,
Innovation, Education, and Social Science (CoMBInES)
Taichung, Taiwan 3-6 March, 2022**

- Saputri, R., & Rahayu, D. A. (2020). *Penurunan Resiko Bunuh Diri Dengan Terapi Relaksasi Guided Imagery Pada Pasien Depresi Berat*.
- Sari, A. C., Hartina, R., Awalia, R., Irianti, H., & Ainun, N. (2018). Komunikasi dan Media Sosial. *Jurnal The Messenger*, 3(2), 69. <https://journals.usm.ac.id/index.php/themesenger/article/view/270>
- Septian, D., Fatman, Y., & Nur, S. (2021). Implementasi MDLC (*Multimedia Development Life Cycle*) Dalam Pembuatan Multimedia Pembelajaran Kitab Safinah. *Jurnal Computech & Bisnis*, 15(1), 15–24.
- Setiawan, I. K. (2019). Adaptasi Cerita Rakyat Jayaprana Dan Layonsari Dalam Bentuk Animasi 2D. *Jurnal Nawala Visual*, 1(2), 88–94. <https://doi.org/10.35886/nawalavisual.v1i2.30>
- Sumendap, I. Y., Tulenan, V., Diane, S., & Paturusi, E. (2019). Pembuatan Animasi 3 Dimensi Menggunakan Metode *Multimedia Development Life Cycle* (Studi Kasus: Tarian Dana Dana Daerah Gorontalo). *Pembuatan Animasi 3 Dimensi Menggunakan Metode Multimedia Development Life Cycle (Studi Kasus: Tarian Dana Dana Daerah Gorontalo)*, 14(2), 227–234. <https://doi.org/10.35793/jti.14.2.2019.23998>
- Thifala, A. Z., Wardhana, M. I., & Sutrisno, A. (2021). Perancangan Animasi 2D Mengenai Upaya Pencegahan Penyakit Saat Musim Hujan. *JoLLA: Journal of Language, Literature, and Arts*, 1(7), 995–1009. <https://doi.org/10.17977/um064v1i72021p995-1009>
- Tri Widadijo, W. (2020). 12 Prinsip Animasi Dalam Serial “Adit & Sopo Jarwo.” *Aksa: Jurnal Desain Komunikasi Visual*, 1(1), 070–085. <https://doi.org/10.37505/aksa.v1i1.7>
- Yasa, G. P. P. A., Narpaduhita, K. A. S., & Purwita, D. G. (2019). Perancangan Film Animasi Pendek 2D Sebagai Media Kampanye Penanganan Anxiety Disorder. *Jurnal Bahasa Rupa*, 2(2), 146–152. <https://doi.org/10.31598/bahasarupa.v2i2.368>