

Design of a 2D Animation as an Educational Medium Regarding the Impact of Social Media Content Consumption Addiction on Adolescents

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The high use of short video-based social media has led to an addiction phenomenon among adolescents, which has a negative impact on mental health and social interactions. Conventional education is often considered rigid and unable to attract the attention of this generation. This study aims to design a 2D animation entitled "Terputus" as an effective alternative educational media to increase adolescent awareness of the dangers of addiction to content consumption through an emotional and relatable storytelling approach. The design method used is descriptive qualitative by adapting the animation industry workflow (pipeline). Data collection was carried out through literature studies, observations, expert interviews, and testing the effectiveness of the work to the target audience (among adolescents 10-18 years) with pre-test and post-test methods. The results of the design of a 2D animation work that is proven effective in conveying messages because respondents feel connected to the story and successfully raises adolescent awareness about the negative impacts of content addiction. Originality, 2D animation with a storytelling approach is a relevant and memorable educational media to convey digital literacy messages to among adolescents effectively.

Keywords: Animation, Education, Social Media Addiction, Adolescents, Storytelling.

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1. Introduction

Technological developments in social media have become an integral part of many people's daily lives. Activities that were once conducted solely in person such as communicating and exchanging information have now largely shifted to social media platforms. Advancements in information technology have driven people to adapt, serving as the catalyst for this change. A recent report by Meltwater & We Are Social (2025) indicates that over 5.24 billion people approximately 63.9% of the global population use social media, representing a 4.1% increase from the previous year [1]. In Indonesia, the number of recorded social media users reached 143 million by early 2025, with an average daily usage of 3 hours and 8 minutes; these data highlight the significant role social media plays in people's lives today [1].

Social media platforms particularly those featuring short-form video, such as Instagram, TikTok, Facebook, and YouTube have recently become highly popular. Surveys indicate that the most widely used social media platform in Indonesia is WhatsApp, with a usage rate of 91.7%, followed by Instagram (84.6%), Facebook (83.0%), and TikTok (77.4%) [1]. TikTok records the highest usage duration at 44 hours and 54 minutes per month, followed by YouTube at 29 hours and 4 minutes. Indonesia ranks sixth among the ten countries with the highest usage duration [2]. These facts demonstrate that social media platforms featuring short-form video have become an integral part of daily digital routines, including for adolescents. Such habits have the potential to foster addictive consumption patterns, especially when social media is used as an escape from social and emotional pressures [3].

The popularity of social media platforms featuring short-form video stems from easy access and algorithms tailored to user preferences; furthermore, various interactive features encourage users to keep consuming content on these platforms. These platforms are specifically designed to foster a "flow experience" that keeps users engaged with the app for extended periods [4]. Features such as infinite scrolling and push notifications play a crucial role in triggering dopamine release, prompting users to continuously prolong their content consumption. It is precisely these mechanisms that reinforce the intensity of usage and drive ceaseless, repetitive interaction.

High-intensity social media usage, characterized by continuous, repetitive interaction over extended periods, can have negative consequences for users particularly adolescents who are still in the process of forging their identities and learning to manage their emotions [5]. Such consumption patterns can foster unhealthy digital habits and adversely affect overall mental health. One manifestation of this is social media addiction, driven by the constant scrolling through and consumption of short-form video content on these platforms. This addiction has been linked to further issues, including increased social anxiety and stress, as well as the potential for long-term sleep disturbances, emotional exhaustion, and even post-traumatic stress [6].

Another observed negative impact of the continuous consumption of social media content is a decline in concentration during study. This indicates a significant reduction in study focus levels among students at MA NWDI Lepak due to extensive TikTok usage. Although this study focuses on TikTok, similar patterns may occur on other platforms with comparable algorithmic characteristics, such as Instagram, YouTube, and Facebook[7].

It is important to recognize that technology including social media is fundamentally a tool designed to assist with daily life and work. Consequently, social media technology is not inherently negative; it can have positive effects depending on the context of its use [8]. Therefore, it is crucial for users to exercise a high degree of self-control and awareness in managing the intensity and context of their social media usage to maintain mental and emotional well-being.

Research indicates that adolescents with low self-control are more susceptible to social media addiction [9]. Consequently, there is a need to enhance digital education regarding self-control in social media usage so that adolescents recognize the importance of exercising such control. Digital literacy programs are considered effective in mitigating the negative impacts of social media [10]. However, the adolescents in the study reported rarely receiving such education within formal schooling and expressed a desire to gain the knowledge needed to use social media wisely [10].

While educating adolescents on the importance of self-control regarding social media use offers a potential solution, formal and rigid educational approaches often fail to capture the attention of young people accustomed to rapid, dynamic visual stimulation [7]. Consequently, there is a need for educational delivery methods capable of engaging adolescents.

One educational approach that is considered interesting for teenagers is using animation media. Animation media in learning can increase attraction and tend to be easier to remember among teenagers. Animation has the power to increase teenagers' understanding by combining interesting visual, narrative and storytelling elements [11].

Storytelling itself is a form of conveying ideas, personal experiences, beliefs and life lessons through narratives that arouse emotions and provide new insights. The advantage of storytelling compared to formal communication methods such as reports or speeches lies in its ability to convey messages that are not only factual, but also emotional. Through a narrative structure, storytelling is able to convey hidden knowledge,

broaden the context, and increase the audience's potential for understanding and memory.

In educational animation, storytelling serves as a vital tool, capable of transforming facts into more meaningful experiences. Storytelling manifests through various elements ranging from character actions, visual design, and movement pacing to non-verbal emotional expressions. Consequently, educational messages become more impactful and avoid feeling preachy when framed within scenes that mirror the daily lives of teenagers addressing issues such as study concentration, social anxiety, or tendencies toward self-isolation.

Based on the aforementioned phenomenon, the designer developed a project titled "2D Animation Design as an Educational Medium on the Impact of Social Media Content Consumption Addiction Among Adolescents." The project employs a relatable storytelling approach centered on the daily struggles faced by addicted teenagers such as difficulty focusing on tasks, anxiety when expressing emotions, and social withdrawal. This approach aims to convey the educational message sincerely and emotionally, avoiding a preachy tone. Furthermore, the design seeks to address the need for relevant, engaging, and effective educational media that can convey these messages and guide adolescents toward healthier, wiser social media habits.

2. Literature Review

Social Media

Social media is an electronic platform that enables people to interact, share information, and build social networks without geographical limitations [12]. These platforms facilitate communication, socialization, and entertainment. In Indonesia, adolescents are avid users of social media; the majority access various platforms such as TikTok, Instagram, Facebook, and YouTube on a daily basis [13]. This phenomenon demonstrates the deep integration of the digital world into the daily lives of adolescents.

While social media platforms offer a multitude of features, the short-form video function stands out as particularly prominent. These videos deliver quick, concise content typically lasting less than five minutes that is easy to consume and highly personalized, thanks to sophisticated algorithms that tailor the experience to each user's specific preferences [4]. It is precisely this type of feature that drives a continuous release of dopamine, causing users to become unconsciously immersed in the activity and making it difficult for them to stop.

Adolescence

Adolescence is a transitional period between childhood and adulthood characterized by significant changes physical, cognitive, emotional, social, and psychological. The Ministry of Health of the Republic of Indonesia (2014) defines the adolescent age range as individuals between 10 and 18 years old. Adolescence is a phase highly vulnerable to negative impacts, particularly regarding mental health issues such as stress, anxiety, and depression [5]. This is because adolescents are still learning to manage their emotions stably during this stage; consequently, their responses to social and digital pressures can be less controlled than those of adults.

Social Media Addiction

Social media addiction is a condition in which individuals show excessive dependence on the use of social media so that it interferes with their social, emotional and academic functioning [5]. In this research, social media addiction is defined as a condition where individuals are unconscious and unable to control the frequency or duration of consumption of social media content, so that these activities unconsciously

interfere with daily life activities. In adolescents, this addiction can cause decreased self-control, changes in sleep patterns, decreased quality of social relationships in the real world, and affects the process of searching for identity and managing emotions [3] [14].

The characteristics or signs that someone is addicted to social media can be identified from unhealthy daily behavior. They often steal opportunities to open social media, scroll without a clear plan, and often check their cellphones when they first wake up or before going to bed. Feelings of restlessness or unease when not holding a cell phone or not having internet access are also important indicators. Based on the Meltwater & We Are Social report (2025), the average time using social media in Indonesia reaches 3 hours 8 minutes per day. So this above average usage can be an early indication of a tendency to excessive consumption.

2D Animation

Animation is a medium in which an animator brings static objects to life or sets them in motion, creating the impression of vitality. Fundamentally, animation consists of a series of images arranged sequentially to create the illusion of movement [15]. 2D animation specifically utilizes two-dimensional images (defined by length and width) moved within a specific timeframe to present an engaging visual narrative. Educational animation helps clarify abstract concepts and maintain audience attention, particularly among adolescents who tend to favor dynamic visual content [11]. A crucial element of animation is movement, which allows imagination to materialize and helps convey emotions and messages to the audience through supporting elements such as storytelling, characters, audio, and effects.

2D animation production generally follows a systematic pipeline comprising pre-production, production, and post-production to ensure optimal quality. Pre-production is the initial phase involving story concept development, scriptwriting, character design, storyboarding, and the creation of animatics. This stage serves as a vital foundation for establishing the animation's visual and narrative direction [15]. During the production phase, animators create keyframes, generate in-between frames, perform image cleanup, and execute digital coloring. Techniques such as frame by frame animation are employed for complex scenes, while Motion tween is used for simpler movements to enhance efficiency. Motion tween is an animation technique that allows the computer to automatically generate intermediate frames (in-betweens) between two keyframes, resulting in smooth, efficient, and consistent movement.

Post-production encompasses final editing, the addition of visual effects, color grading, audio synchronization, and the rendering of the final output. This stage ensures that all animation elements are harmoniously assembled prior to publication[16].

Conceptual Framework

A conceptual framework is a structure or pattern of thought designed to systematically arrange and organize ideas within a research study, written work, or project design.



Fig. 1. Conceptual Framework

Mind Map

A mind map was created to illustrate the relationship between the educational aspects of 2D storytelling animation and the issue of short-form video content addiction among adolescents on social media. Key elements such as sophisticated algorithms and infinite scrolling are identified as triggers for addiction, resulting in consequences for high school students that include difficulty focusing, sleep deprivation, social isolation, and anxiety.

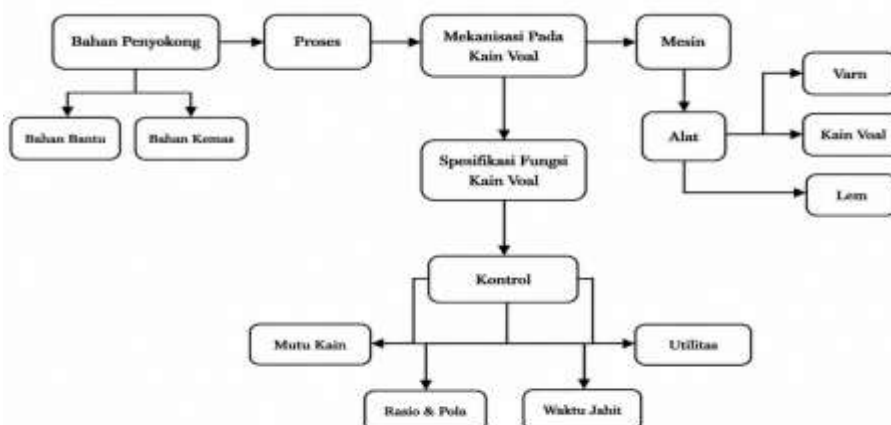


Fig. 2. Mindmap

3. Method

The design method employed in this study is Research and Development, utilizing a qualitative descriptive approach. The design process is based on the standard animation industry workflow (animation pipeline). This method was selected to gain an in-depth understanding of the phenomenon of social media content addiction while simultaneously creating an effective 2D animation to serve as an educational tool for adolescents. This approach facilitates the gathering of firsthand insights from the target audience and experts, resulting in a work that is relevant and contextual, and capable of emotionally engaging the audience to encourage a shift toward wiser behavior.

Data Collection Techniques

Data collection was carried out using the following primary techniques: (1) Literature Review: Examining various references including scientific articles, survey reports, books, and relevant prior research to

strengthen the theoretical foundation and support the animation design process. (2) Observation: Directly observing the general behavior of adolescents when interacting with social media to understand their habits, consumption duration, and responses to existing content. (3) Expert Interview: Conducting an online interview with a mental health expert, Dr. Reinaldo Batara, Sp.KJ. This interview aimed to gather information regarding the phenomenon of social media addiction, its psychological impact on adolescents, and potential solutions. (4) Testing the Animation with the Target Audience: Testing the work with the target audience (adolescents aged 10–18) through both in-person and online interviews. The objective was to gauge the target audience's opinions on the animation. This process also allowed the designer to gain in-depth insight into the audience's experience while viewing educational content presented through animation. The testing was divided into two stages: (a) Pre-Test: Conducted immediately before respondents watched the animation. This stage aimed to explore their initial understanding, expectations, assumptions, and attitudes regarding social media addiction and scroll-based short-form video content. The results helped establish the respondents' mindset prior to exposure to the animation's educational message. (b) After-Test: Conducted immediately after respondents watched the animation. This stage aimed to evaluate changes in their understanding, impressions, and attitudes. The researcher explored in depth how respondents interpreted the educational message, what they felt, and the extent to which the animation successfully resonated emotionally and raised awareness regarding the risks of content addiction.

Data Analysis Methods

Data from literature studies, observations, expert interviews, and trial results will be analyzed descriptively to identify content consumption patterns, risk factors for addiction, and the effectiveness of educational messages in animation.

2D Animation Design

The 2D animation design process employs standard industry practices specifically a structured pipeline to achieve optimal results. (1) Pre-production: This stage encompasses the development of ideas and story themes; the creation of the synopsis, storyline, script, character designs, environment designs, prop designs, color and sound concepts, voice-overs, and animation concepts; as well as storyboarding and the creation of an animatic to ensure the educational narrative aligns with the daily lives of teenagers. (2) Production: Animation is created using frame-by-frame and motion tween techniques. The production process utilizes professional software such as Toon Boom Harmony and Adobe After Effects. (3) Post-production: This involves audio synchronization, the addition of visual effects using Adobe After Effects, color grading, and rendering to produce a high-quality animated output.



Fig. 3. 2D Animation Design Workflow

4. Results And Discussion

The results and discussion in this study outline the 2D animation design process and the findings derived from data collection comprising literature reviews, observations, expert interviews, and a two-stage evaluation (pre-test and post-test). This section aims to address the research problem, interpret the findings, integrate the results of observations and interviews, and explain audience responses to the designed educational animation.

Observation Results, Initial observations focused on the habits of adolescents in the designer's local area who actively use at least one of the following applications: TikTok, Instagram, Facebook, or YouTube. It was found that the continuous consumption of vertical-scroll short-form video content has become part of their daily routine, characterized by prolonged and difficult-to-control viewing sessions.



Fig. 4. Observed Social Media App Screen Time Data

Literature supports these findings, indicating that average TikTok usage in Indonesia exceeds 44 hours per month [1]. Research regarding the negative impacts of excessive content consumption also highlights increased risks of addiction, reduced self-control, sleep disturbances, and social anxiety, as well as a decline in the quality of real-world interactions [9] [6].

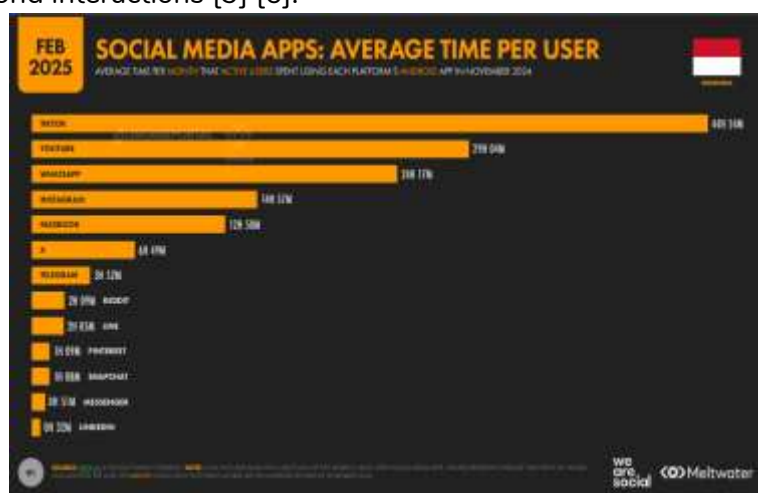


Fig. 5. Social Media App Usage Data in Indonesia

Expert Interview Results, To gain a deeper understanding of the phenomenon of social media content

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addiction among adolescents, I conducted an online interview with Dr. Reinaldo Batara, Sp.KJ, a psychiatrist with 14 years of clinical experience. The interview took place on June 2, 2025, and focused on the root causes, psychological impacts, and actionable solutions. Key points from the interview include:

Addiction Patterns and Changes in Ways of Thinking, According to Dr. Reinaldo, short video platforms like TikTok and Reels are deliberately designed to make their users feel at home. Fast-changing content provides instant stimulation that triggers the release of dopamine, a chemical in the brain that makes us feel happy. This is what causes teenagers to become addicted. This constant exposure to instant stimulation makes the teenage brain accustomed to fast-paced gratification. As a result, changes appear in their thinking patterns and responses to the surrounding environment, such as: (a) **Difficulty Focusing:** Teenagers become bored easily and have difficulty concentrating for long periods of time. (b) **Lack of patience:** They tend to want everything to be instant and don't like waiting. (c) **Easily Distracted:** It becomes more difficult to maintain attention on one thing.

Impact on Social Interaction and Mental Health, Social media use also influences how teenagers judge themselves and others. Digital standards such as the number of likes, views, or comments are starting to be considered a measure of self-worth. This phenomenon encourages: (a) **Unhealthy social comparisons:** Teenagers often compare their lives with what is seen on social media which often only shows a person's best side. (b) **Decreased sense of confidence (incurred):** When their content does not get attention or is not "viral", there is a feeling of less significance. (c) **Social anxiety:** Even when not holding a smartphone, many teenagers, (d) **Feel anxious** because they are afraid of being left behind by others or fear of missing out (FoMO).

Recommended Solutions and Approaches, According to Dr. Reinaldo, prohibition is not the right solution. In fact, what is more important is growing awareness and the ability to control oneself when using social media. Several steps that can be taken at the individual level include: (a) **Using social media consciously and wisely** by understanding both the positive and negative sides. (b) **Make a special schedule** for accessing social media so that it doesn't become an impulsive habit. (c) **Balancing screen time** with other more meaningful activities, such as sports, hobbies, or direct social interaction.

2D Animation Design, The 2D animation design process in this work is based on information gathered through three primary methods: direct observation, literature review, and expert interviews. Furthermore, the design process follows the standard stages used in the animation industry: pre-production, production, and post-production.

Pre-production

The pre-production stage is the initial phase of the animation design process, focusing on concept planning, data gathering, and the formulation of initial designs.

a. Story Concept and Title

Based on observations, literature reviews, and expert interviews, the designer developed a story concept inspired by the habits of teenagers addicted to consuming short-form video content on social media platforms like TikTok and Instagram. This habit has negative consequences, such as reduced academic focus, diminished social interaction, and impaired emotional and self-control. Given this context, the designer created a narrative that depicts the process of a person becoming trapped in social media addiction, eventually realizing the impact, and striving for self-improvement.

For this animation project, the designer chose the title "Terputus" (Disconnected), referring to the teenager's state of disconnection from the real world caused by their addiction to short-form social media videos. This

title was selected because it symbolically represents the reality experienced by the protagonist, who has become cut off from the real world.

b. Synopsis

The synopsis serves a crucial function as a guide, helping the designer understand the story's outline, themes, and intended message during the animation production process. The synopsis for the animated film “Terputus” is described as follows: “The story centers on a teenager named Raka, whose behavior changes due to his habit of excessively consuming short-form videos on social media. Initially an active student, Raka gradually withdraws from social circles, loses focus on his studies, and drifts away from those closest to him. His dependence on the digital world makes it difficult for him to distinguish between reality and illusion. The story depicts Raka’s journey of recognizing his condition and his gradual effort to reconnect with the real world.”

Judul : Terputus
Genre : Drama, Slice of Life
Target : Remaja 10-18 Tahun
Tema : Kesadaran akan pentingnya membatasi konsumsi video pendek saat menggunakan media sosial
Sinopsis :
Cerita ini berfokus pada seorang remaja bernama Raka yang mengalami perubahan perilaku akibat kebiasaannya mengonsumsi video pendek secara berlebihan di media sosial. Raka awalnya adalah siswa yang aktif, namun seiring waktu ia mulai menarik diri dari lingkungan sosial, kehilangan fokus belajar, dan menjauh dari orang-orang terdekatnya. Ketergantungan pada dunia digital membuatnya sulit membedakan mana yang nyata dan mana yang semu. Cerita ini menggambarkan proses Raka menyadari kondisi dirinya dan perlahan berusaha untuk kembali terhubung dengan dunia nyata.

Fig. 6. Synopsis of the animated film “Terputus”

c. Script

The script for this animated film was developed over a two-day period, aligned with the previously established theme and title. It was crafted with detailed specifications for every scene including visual descriptions, plot progression, character dialogue, camera transitions, and sound effects to facilitate the animation production and post-production phases. A natural, informal style was employed for the dialogue to ensure the interactions felt relatable to the lives of teenagers.



Fig. 7. Manuscript

d. Visual Concept

In the design of the 2D animated film “Terputus”, character designs were created to philosophically Design of a 2D Animation as an Educational Medium Regarding the Impact of Social Media Content Consumption Addiction on Adolescents. Dhani Agustinus Syah et.al

represent real-life high school teenagers. Each character was crafted with distinctive traits reflecting their roles in the story's daily life: Raka as a withdrawn and emotional teenager, Salsa as an empathetic and honest best friend, Raka's mother as a loving parental figure, and Mr. Damar as a calm, wise mentor. This approach aims to help teenage viewers easily connect with the characters and understand the conflicts presented.

To support the story's atmosphere, an earth-tone color palette was selected for its neutrality and flexibility in adapting to the mood of each scene ranging from dark, dim tones that depict addiction and isolation to brighter, warmer colors that illustrate recovery and social connection. The visual concept development process took approximately two weeks and involved designing characters, backgrounds, and props to support a narrative that is educational, emotional, and relatable to a teenage audience.

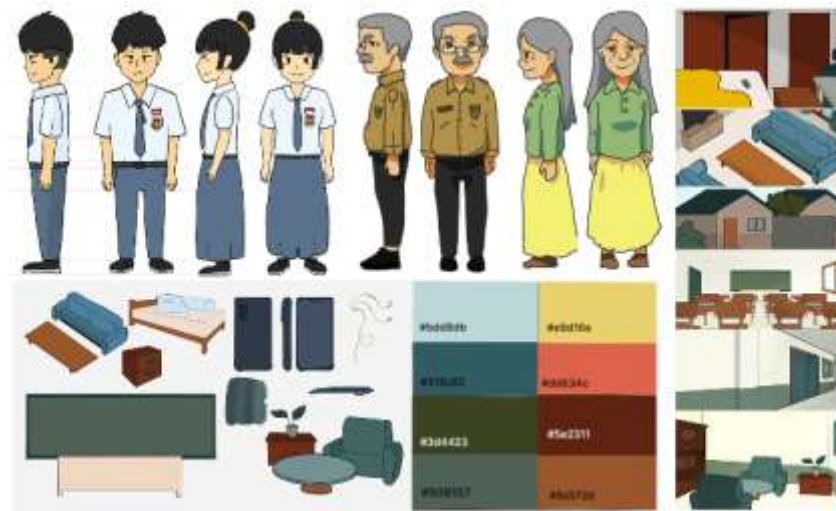


Fig. 8. Visual Concept

e. Audio Concept

The audio concept is designed to support emotional storytelling through background music, ambient sound, voice-overs, and sound effects (SFX). The background music consists of instrumental tracks that evoke melancholic, tense, or uplifting moods, reflecting the protagonist's emotions in various scenes. Sound effects (SFX) are employed to reinforce the atmosphere; examples include app notifications, footsteps (walking and running), location-specific ambient sounds, and more. Each element serves to build an atmosphere that aligns with the theme and the protagonist's character development.

In addition to background music, sound effects, and ambient audio, the design incorporates voice-overs tailored to each character's traits: (1) Raka has the voice of a teenage boy calm, emotional, and at times flat reflecting a sense of detachment from his surroundings. (2) Salsa has the voice of a teenage girl firm yet caring portraying an empathetic best friend who tries to bring him to his senses. (3) Raka's mother has a soft, loving, and emotional voice, emphasizing maternal warmth. (4) Mr. Damar has a calm and wise voice, conveying a sense of guidance and protection.

f. Storyboard

The storyboard is created to serve as a visual guide for the animation production process. Storyboard illustrations are produced using Adobe Illustrator and Adobe Photoshop, then neatly arranged within Adobe Illustrator.

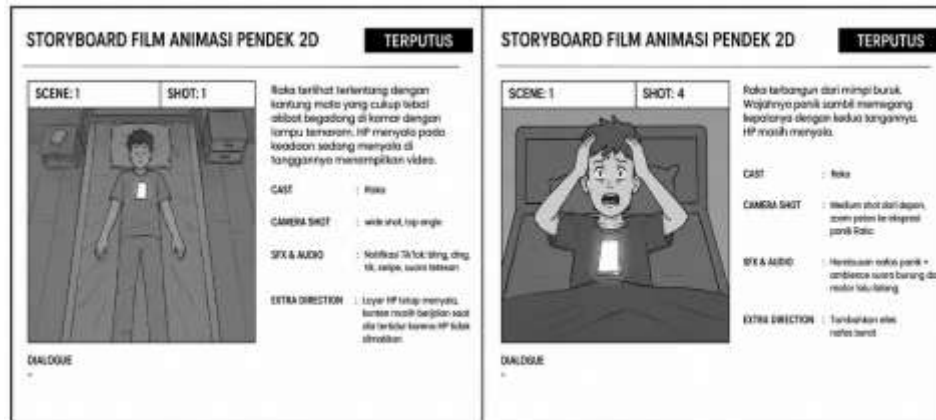


Fig. 9. Storyboard

g. Animatic

In this design process, the animatic was created by incorporating additional illustrations to clarify transitions, character expressions, and movement timing, and was complemented by preliminary audio elements such as voice-overs, sound effects, and background music that will be refined during the post-production stage.

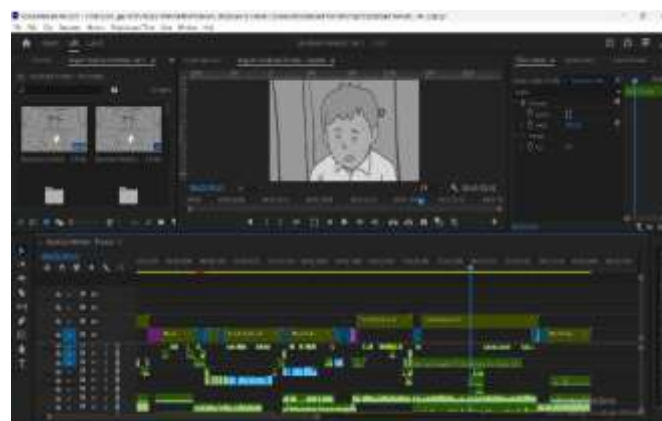


Fig. 10. Animatic

Production

The production stage is the core phase of the animation design process, where the concepts and plans developed during the pre-production stage are brought to life visually. The 2D modeling process takes place during this stage.

a. Staging

At this stage, the designer can visualize how the character's visual interaction with the background will unfold in each scene. The staging results serve as the primary guide for the designer in determining the subsequent steps of the animation process.



Fig. 11. Staging

b. Key Animation and In-Between & Motion Tweening

At this stage, the designer creates several keyframes to serve as a reference, using rough, unrefined line sketches, as the focus is on establishing poses and expressions for key moments. This process is carried out over 13 days using Toon Boom Harmony software.

For lighter scenes that do not require detailed expressive movements, the process utilizes the motion-tweening technique in Adobe After Effects. To animate the objects, the designer employs various After Effects tools such as Puppet tools and Transform tools along with an external preset known as SF-Candy.

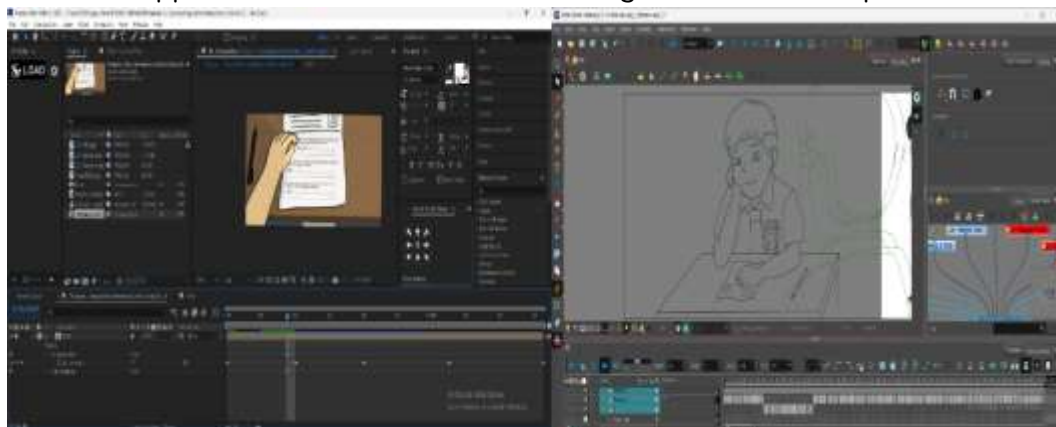


Fig. 12. In-Between & Motion Tweening

c. Clean Up Animation

Clean up is very important because the results will be the main basis for the coloring process. The in-betweening and clean-up processes took the longest of all the production stages for this animation approximately one month for all scenes requiring frame by frame techniques.

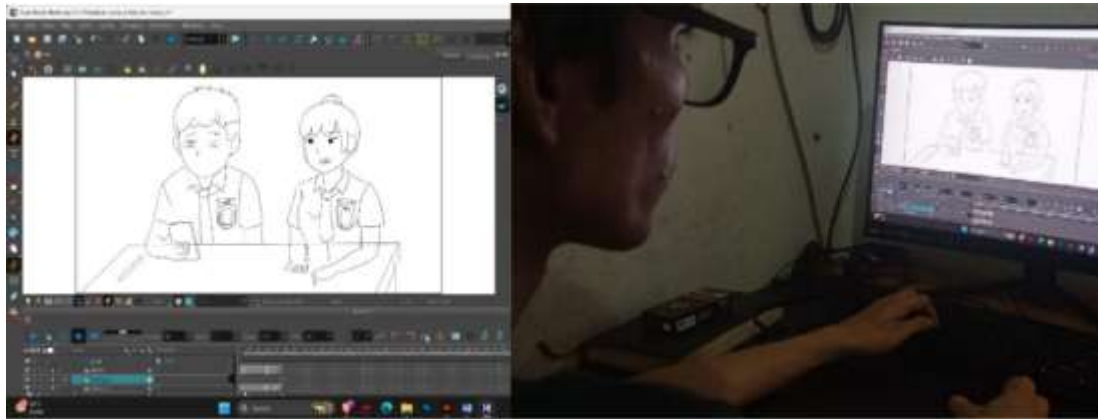


Fig. 13. Animation Clean-up

d. Coloring

The next stage is coloring, which involves filling in the base color for each frame. The colors used are based on the palette established during the pre-production phase.

Post-production

The post-production stage is the final phase in designing 2D animation as an educational medium, focusing on the process of refining visuals and audio.

a. Composition & VFX and Mixing & Mastering Audio

The process of composing and adding visual effects (VFX) was carried out using two applications, namely Adobe Premiere Pro and Adobe After Effects. Scene assembly was performed in Premiere using a "cut to cut" method to ensure a well-organized narrative flow. For visual effects such as lighting, shadows, and other supplementary elements the designer utilized the "Replace with After Effects Composition" feature to streamline the workflow and maintain direct integration with the Premiere project file.

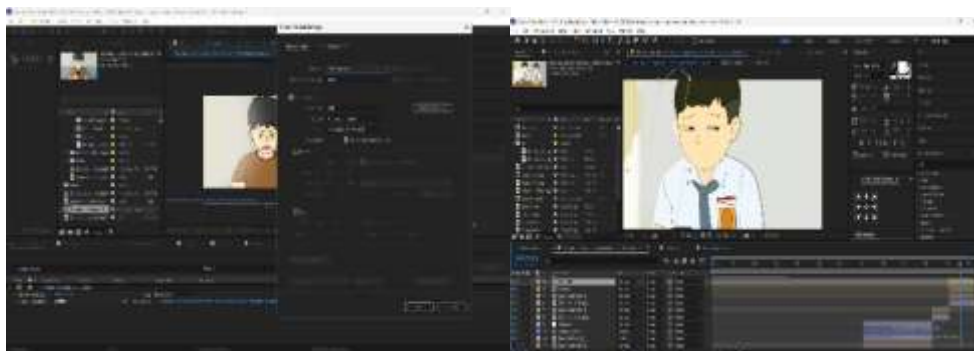


Fig. 14. Composition & VFX

Subsequently, audio mixing and mastering are carried out during the final post-production stage to refine the overall audiovisual experience. At this stage, the designer adjusts the volume levels of dialogue, sound effects, ambience, and background music to ensure a balanced mix where the elements do not interfere with one another.

b. Rendering

The rendering process takes place after all visual and audio elements have been properly arranged on a single, complete timeline. At this stage, the designer exports the work from Adobe Premiere as a video file

configured for Full HD resolution, 24 fps, and landscape format tailored to the final output requirements.



Fig. 15. Rendering

Discussion

Based on the design process of the 2D animation "Terputus" (Disconnected) supported by data from observations, literature reviews, expert interviews, and audience testing the designer concludes that a 2D animation employing an emotional storytelling approach can serve as an effective educational medium. It helps raise awareness among adolescents regarding the dangers of addiction to short-form video content on social media.

Testing was conducted with ten adolescents aged 10–18 comprising junior and senior high school students who were accustomed to consuming short-form video content on platforms such as TikTok, Instagram, and YouTube. Interview results were categorized into two sets: pre-test results (obtained before watching the animation) and post-test results (obtained after watching it).

Pre-test results indicated that the majority of these adolescents had established a habit of consuming short-form video content regularly and for extended periods. Generally, they engaged in this activity for entertainment or as an escape from boredom. They struggled to control their usage duration and perceived content on platforms like TikTok and Instagram Reels as highly addictive due to its fast-paced and varied nature. Although some respondents were aware of the negative impacts, their understanding remained limited.

Key Pre-Test Findings: (1) Scrolling habits were prolonged and difficult to control. Respondents admitted to spending over four hours a day sometimes late into the night often doing so unconsciously. (2) Scrolling served as an escape from boredom, loneliness, or a lack of other activities. Younger respondents, in particular, engaged in scrolling when they had no friends to play with. (3) Perceived negative impacts were considered minor such as procrastinating on assignments, staying up late, or getting scolded by parents rather than serious issues. (4) Respondents preferred an educational approach that was gentle and non-judgmental. They generally rejected preachy delivery styles, favoring content packaged with engaging, humorous, or touching visuals and narratives. After watching the animation, the majority of respondents demonstrated a shift in awareness regarding the dangers of short-form video content addiction. Teenagers found the story relatable whether through the visuals, narrative, the protagonist's actions, or the emotional resonance. Key post-test findings included: (1) Respondents generally felt a sense of connection, recognizing that the protagonist's experiences such as losing track of time or procrastinating on tasks while engrossed in scrolling mirrored their own real-life situations. (2) Awareness increased regarding the consequences of excessive content consumption, extending beyond time management to include eye health, sleep patterns, and psychological stressors like overthinking. (3) The animation was deemed effective due to its strong emotional and visual impact; scenes depicting behaviors like ignoring others or lacking focus during study sessions often caused by staying up late elicited a strong emotional response.

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(4) Respondents generally noted that the animated storytelling format was more accessible. (5) Compared to formal lectures, respondents found these educational messages easier to digest because they were conveyed in a manner that was engaging, entertaining, and relevant to their daily lives.

An animation designed with a relatable story, visuals reflecting the teenage world, and a narrative that is touching yet non-preachy proved successful in conveying its message subtly yet effectively. This was reinforced by post-test results showing increased awareness and self-reflection among teenagers after viewing the animation. During the design process, visual elements such as character design, audio, actions, and expressions helped reinforce the intended educational message. Furthermore, a design approach aligned with industry animation pipelines ensured the work maintained high technical and narrative quality.

Through this project, the designer recognized that animation serves not merely as entertainment but also as a vital learning medium capable of touching emotions and fostering social awareness, particularly among teenagers. The animated work "Terputus" demonstrates that visual media can bridge the gap between educational delivery and reception by young audiences. Through a gentle, empathetic approach and creative presentation, animation can deliver educational content that is more readily accepted and memorable than rigid, formal methods.

The creator also hopes this work will serve as a reference for developing animation-based educational media in Indonesia, particularly regarding issues such as mental health, self-control, and digital literacy among adolescents. Furthermore, it is hoped that this will encourage the Indonesian animation industry to produce more visual content that is not only aesthetically appealing but also socially meaningful and educative.

5. Conclusion

The results of designing a 2D animation as an educational tool regarding the impact of social media content consumption addiction among adolescents lead to the following conclusions: (1) The 2D animation design demonstrates that its visual presentation and storyline effectively illustrate the importance of adolescent self-control in the sustained consumption of social media content, thereby raising awareness about long-term social media usage. (2) Designed as an educational medium utilizing an engaging visual and narrative approach, the 2D animation effectively conveys information about the negative impacts of social media content consumption addiction, making the content easier for adolescents to understand and accept.

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