



Evaluating the Effectiveness of a 2D Mindfulness Meditation Animation in Enhancing Student Creativity in Batam City

Jimmy Pratama¹, Fenky Fenky², dan Tony Wibowo³
^{1,2,3}Universitas Internasional Batam, Batam, Indonesia
Corresponding author email: 2231053.fenky@uib.com

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Abstract

This study aims to evaluate the effectiveness of a 2D mindfulness meditation animation in enhancing students' creativity at higher education institutions in Batam City through perceived perception. This study is considered important since mindfulness activities have been widely recognized for improving one's ability to concentrate, reduce stress, and foster creativity, yet limited studies have explored its integration through digital animation media. The research applied a descriptive qualitative approach using the MDLC model, which consists six phases: concept, design, material collecting, assembly, testing, and distribution. Data were gathered through open-ended interviews with 20 university students who watched the developed 2D animation, analyzed descriptively to explain participants' perceptions and response. The results indicate that 65% of participants experienced better relaxation and focus, while 62% reported increased motivation for creative thinking after viewing the animation. The synchronized narration, soft pastel visuals, and calm pacing effectively supported mindfulness engagement, although the short duration limited deeper relaxation. The findings suggest that mindfulness-based animation can serve as an alternative learning medium to promote emotional balance and cognitive readiness. The novelty of this study lies in combining mindfulness practice and educational animation to enhance creativity among non-psychology students in Indonesia. These findings imply that the integration of mindfulness principles into interactive learning media can enrich educational innovation and mental well-being in higher education.

Keywords: 2D Animation; Creativity; Learning Media; Mindfulness Meditation

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INTRODUCTION

Mindfulness meditation has increasingly gained attention in educational and psychological research due to its significant impact on emotional regulation, attention, and creativity (Krisdiyanto, 2022; Zabelina et al., 2020). Mindfulness refers to the practice of consciously directing one's attention to the present moment with deliberate awareness and intention and nonjudgmentally encourages individuals to focus consciously on current experiences (Miles et al., 2023; Kaur, 2024). Several researchers have reported that engaging in mindfulness activities can significantly reduce feelings of stress and tension, improve concentration, and cultivate positive affect and mental clarity

(Bashmakova & Shcherbakova, 2021; Gallardo & Luna, 2024). Anjali and Istiqomah (2023) also state that mindfulness has been widely used to manage stress and anxiety in various contexts. In educational settings, mindfulness has been integrated into vocational and professional training to support students' attentional control and reflective awareness (Adkha et al., 2021). Through mindfulness training, individuals learn to control attention, manage emotions, and respond calmly to challenges, which in turn facilitates the emergence of creative ideas and flexible thinking (Lee & Jung, 2023; Mehmood et al., 2022).

Creativity itself is a vital ability in the twenty-first century, particularly in the age of industry 4.0, which emphasizes innovation, adaptability, and problem-solving (Yao et al., 2024). Creativity can be described as an individual's capacity to develop new ideas that hold originality and value or products through imagination, exploration, and synthesis of knowledge (Preiss, 2022). Numerous empirical studies have shown a positive link between mindfulness and the development of creative thinking, suggesting that a mindful state can enhance cognitive flexibility and foster divergent thinking (Ngo et al., 2020; Hughes et al., 2023; Gowda & Gautam, 2024). This supports Yousaf and Taylor (2023), who discovered that mindfulness acts as a bridge between emotional regulation and the development of creative thinking. These findings also align with cognitive theories that describe creativity as an outcome of heightened awareness and reduced cognitive rigidity, where flow experience and creative self-efficacy function as important mediating mechanisms (Yao et al., 2024; Sampedro et al., 2019).

Alongside this psychological perspective, technological advancement in education has transformed how creativity and mindfulness can be fostered through digital media. Animation, as a visual communication medium, has emerged as one of the most engaging and effective learning tools to simplify complex concepts and improve retention (Cholik & Umaroh, 2023). Two-dimensional (2D) animation in particular offers flexibility and aesthetic appeal while allowing integration of visual and auditory elements that enhance students' emotional engagement (Amaliah et al., 2023; Hamdiyah & Puspitasari, 2023; Novianti et al., 2023). Research on animation-based interventions demonstrates that guided animation can effectively support mindfulness practice and positively influence creativity, flow, and affective states (Chen et al., 2022). Furthermore, animation has been shown to increase learning motivation and focus, as well as improve comprehension through visualization and storytelling (Yeh et al., 2019; Husaeni & Nandiyanto, 2022). The development of animation media in educational contexts also highlights its adaptability for language and cultural learning environments (Kholidya & Rofiah, 2019; Yeni et al., 2021). These characteristics make 2D animation a promising medium for delivering mindfulness-based practices in education, especially when artistic elements are intentionally designed to stimulate reflective awareness (Lather, 2021).

However, despite the growing interest in mindfulness and creativity, limited research has investigated the integration of mindfulness meditation through animation as a method to enhance creative thinking. The relationship between mindfulness and creativity has rarely been explored within animation-based interventions, particularly in higher education contexts in Indonesia. Although prior studies have examined mindfulness in professional and organizational contexts (Mehmood et al., 2022) and clinical or specialized populations (Sampedro et al., 2019), empirical investigation in Indonesian university settings remains scarce. In addition, limited studies have specifically examined how this approach can be applied among students in Batam City. Therefore, additional research is necessary to develop a deeper understanding of the ways in which mindfulness meditation delivered through 2D animation can influence relaxation, cognitive flexibility, and creativity (Kaur, 2024; Preiss, 2022).

Unlike previous studies that have only examined the theoretical connection between mindfulness practice and creative thinking (Hughes et al., 2023; Gowda & Gautam, 2024), this research focuses on the practical application of mindfulness through 2D animation as a form of interactive and visually engaging learning media. Empirical evidence indicates that animation-guided mindfulness interventions can directly enhance creativity and flow experience (Chen et al., 2022), yet contextual adaptation within Indonesian higher education has not been sufficiently addressed. The objective of this research is to develop a 2D mindfulness meditation animation that not only introduces mindfulness practice but also analyzes how it contributes to enhancing students' creative thinking and

creative self-efficacy (Yao et al., 2024; Lee & Jung, 2023). This study provides a novel contribution by integrating mindfulness, animation, and creativity within the context of non-psychology university students in Indonesia, especially in Batam City, thereby extending previous findings on mindfulness in arts engagement and educational innovation (Zabelina et al., 2020; Adkha et al., 2021). The study addresses the following research questions (1) How do students perceive the effectiveness of 2D mindfulness meditation animation in fostering relaxation and focus and (2) How do students perceive its contribution to creative motivation. The results are expected to contribute to the design of innovative, technology-based learning media that promote emotional balance, focus, and creativity in higher education.

RESEARCH METHODS

This study evaluates the perceived effectiveness of 2D mindfulness animation based on students' subjective experiences rather than experimental measurement of creativity outcomes. Creativity was operationalized as students' perceived readiness to generate new ideas and their motivation to engage in creative academic tasks following the mindfulness session. The study employed a qualitative descriptive approach integrated with the Multimedia Development Life Cycle (MDLC) model to design and evaluate a 2D mindfulness meditation animation aimed at improving students' relaxation, focus, and creative engagement. The MDLC framework, as also applied by Bramayudha et al. (2025), was selected because it provides a structured yet flexible process for multimedia-based educational product development, consisting six sequential stages: concept, design, material collecting, assembly, testing, and distribution. By combining technological, psychological, and educational perspectives, this research contributes to the innovation of mindfulness-based learning media that support emotional balance and creative readiness among university students.

The study was conducted from August to September 2025, and data collection was carried out through virtual meetings to ensure accessibility and consistency of communication with participants. The research subjects consisted of 20 undergraduate students from several universities in Batam City, selected using a purposive sampling technique. The inclusion criteria were active students aged between 18 and 25 years, who had experienced academic stress, had not previously engaged in formal mindfulness training, and voluntarily agreed to participate throughout the study. Students with prior meditation experience or those unable to complete the research process were excluded. This participant group was chosen because it represented learners who could benefit from mindfulness-based educational media in managing focus and creativity.

The research procedure followed two main stages. The first focused on developing the 2D mindfulness animation through the MDLC framework, and the second on evaluating its perceived effectiveness. During the concept phase, the researcher formulated the storyline highlighting mindfulness practices through breathing awareness and emotional regulation. The design phase included the creation of a detailed storyboard visualizing five main scenes: the stress state, introduction to mindfulness, guided breathing, reflection, and renewed creativity. In the material collecting phase, all assets such as background images, sound effects, and narration were obtained from open-license platforms including Freepik Premium to ensure ethical use of resources. During the assembly stage, the animation was produced using Adobe After Effects and CapCut, synchronizing narration, visuals, and background music into a cohesive composition. The testing phase consisted of internal review (alpha testing) by supervisors and external review (beta testing) involving several students to collect feedback for refinement. The final animation was then published during the distribution phase via an online platform for evaluation purposes.

This study used two main instruments, namely an interview guide and a questionnaire, using data collection methods in the form of in-depth interviews, questionnaire surveys, and direct observation. The interview guide was designed to explore participants' experiences after viewing the animation, focusing on five main aspects: (1) perceived effectiveness in helping relaxation and focus, (2) influence on creative motivation, (3) synchronization between narration and visuals, (4) contribution of visual design to the meditative atmosphere, and (5) clarity of meditation instructions. The in-depth interviews allowed participants to describe their emotional and cognitive experiences freely, providing

qualitative insights into the animation's impact. The questionnaire survey complemented the qualitative findings by capturing participants' written reflections and short responses. It measured their perception of clarity, emotional tone, and usefulness of the animation as a mindfulness learning medium. There are several questions for data collection through interviews, as presented in the Table below.

Table 1. Interview Questions

No.	Question
1	How do you evaluate the perceived effectiveness of the 2D mindfulness meditation animation in helping you feel more relaxed and focused?
2	To what extent does the 2D mindfulness meditation animation influence your interest in generating new creative ideas?
3	How would you assess the harmony between the audio narration and the visual presentation in supporting the meditation practice?
4	What are your opinions about the visual design (characters, backgrounds, objects) in building a calm and meditative atmosphere?
5	How do you evaluate the clarity of the meditation instructions presented in the 2D animation?

The data were analyzed using a descriptive qualitative approach to explain participants' perceptions, experiences, and responses toward the 2D mindfulness meditation animation. Interview, observation, and questionnaire data were described systematically to present trends of relaxation, focus, and creative motivation among participants. This approach aimed to provide a clear and comprehensive description of how the animation functioned as a mindfulness-based learning medium for students. Interview responses were coded into thematic categories such as "positive relaxation response," "moderate effect," and "limited effect." The percentage values were calculated based on the frequency of participants' dominant responses within each category. The formula for the percentage is given below.


$$\text{Percentage} = \frac{\text{Number of respondents in the category}}{\text{Total respondents}} \times 100\%$$


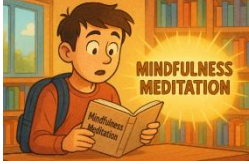
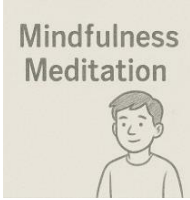



Participants' responses were categorized into thematic groups, and the percentage values were calculated by dividing the number of dominant positive responses by the total number of participants (n=20), then multiplied by 100%. Approximately 13 out of 20 participants reported improved relaxation and focus (65%).

RESULTS AND DISCUSSION

The development process commenced with the concept and design phases of the MDLC model. In practice, this phase required defining the animation's title, goals, and intended audience, followed by preparing a storyboard that visualized the narrative and scene sequence. This storyboard later served as the main visual reference throughout the animation production process.

Table 2. Storyboard

Sequence	Scene	Image	Duration	Description
1	1		10s	On a university campus, the main character looks stressed and unmotivated while doing assignments.

1	2		10s	The character sighs, feels a loss of creativity, and the idea bulb above their head fades out.
1	3		10s	The character discovers Mindfulness Meditation through a book or a mobile screen.
2	1		20s	Introduction to mindfulness meditation begins.
3	1		60s	Guided mindfulness breathing sequence is shown.
4	1		10s	After meditation, the character appears calmer and more focused.
4	2		10s	Closing scene, the character regains enthusiasm and creativity, happily continuing their work

After the storyboard was completed, the author carried out the process of organizing and assembling all visual and audio assets into a single animation project file. The editing and media development process was performed using several supporting software programs. Adobe After Effects was used as the main tool to compose and animate the 2D elements, while CapCut was utilized to refine the timing, add subtitles, and synchronize narration with the animation sequence.

After completing the editing process, the author finalized the composition and began producing the 2D mindfulness meditation animation as a learning medium. The production focused on harmonizing the visual and auditory components to ensure that the animation's narration and movement conveyed a sense of calm and relaxation.



Figure 1. Selection of Assets






Figure 2. Animation Process in Adobe After Effects



Figure 3. Sounds Effect, Dubbing, Background Music and Subtitle Editing in Capcut

In developing the model, the author integrated feedback from expert validation and analysis of the preliminary evaluation results. Table 3 present the outcomes of the mindfulness meditation animation that had been developed. The findings from the initial trial served as the foundation for further refinement and improvement of the animation media. The insights obtained from this preliminary evaluation were used to enhance the overall quality, clarity, and perceived effectiveness of the 2D mindfulness meditation video as a learning medium to support focus and creative engagement.

Table 3. Breakdown of the 2D animation

Duration	Scene	Description
00.00-00.12		The opening scene takes place on a university campus, showing a student who appears stressed and unmotivated while working on assignments.
00.12-00.20		The animation depicts the character experiencing mental exhaustion and a creative block during study activities in the library. The character looks fatigued and struggles to concentrate, reflecting how academic pressure can hinder the flow of ideas and lower creativity.
00.21-00.28		This scene portrays the moment when the character looks at their phone screen and finds information about mindfulness as a method to overcome stress and mental stagnation.

00.29-01.03



The scene transitions with a zoom-in effect toward a poster displayed on the phone screen, introducing the concept of mindfulness meditation as the central focus of the animation.

01.04-01.38



The scene illustrates a guided mindfulness meditation using breathing techniques, where the character focuses on the flow of their breath to calm the mind and create an open mental state that encourages inspiration and creative ideas.

01.39-01.47



The character is shown standing in front of the campus building with a bright, confident expression after completing the mindfulness meditation, symbolizing emotional balance and renewed energy.

01.48-02.00



The final scene shows the character back at the library table with a calm and focused expression, representing a transformation from stress and creative fatigue to a state of mindfulness, focus, and enthusiasm for academic activities.

After completing the final version of the 2D mindfulness meditation animation, the alpha test was carried out individually by the author to review every scene of the animation and ensure that each visual and audio sequence matched the previously designed storyboard. This internal test also examined the accuracy of timing, synchronization of narration and visuals, and overall consistency of the mindfulness message. Minor technical adjustments such as subtitle pacing and background audio balance were made to refine the flow of the animation. The beta test was also conducted by inviting a group of 20 university students in Batam who met the inclusion criteria to watch the 2D mindfulness meditation animation. After the viewing session, participants were asked to share feedback and impressions regarding the animation's clarity, emotional tone, and perceived effectiveness in helping them feel more relaxed and focused. Their comments provided valuable insights for improving the animation's content and delivery.

Following the testing process and implementing several revisions, the final version of the animation was submitted to the academic supervisor for evaluation and final approval. Upon receiving approval, the completed 2D mindfulness meditation video was published on the author's YouTube channel as part of the distribution stage.

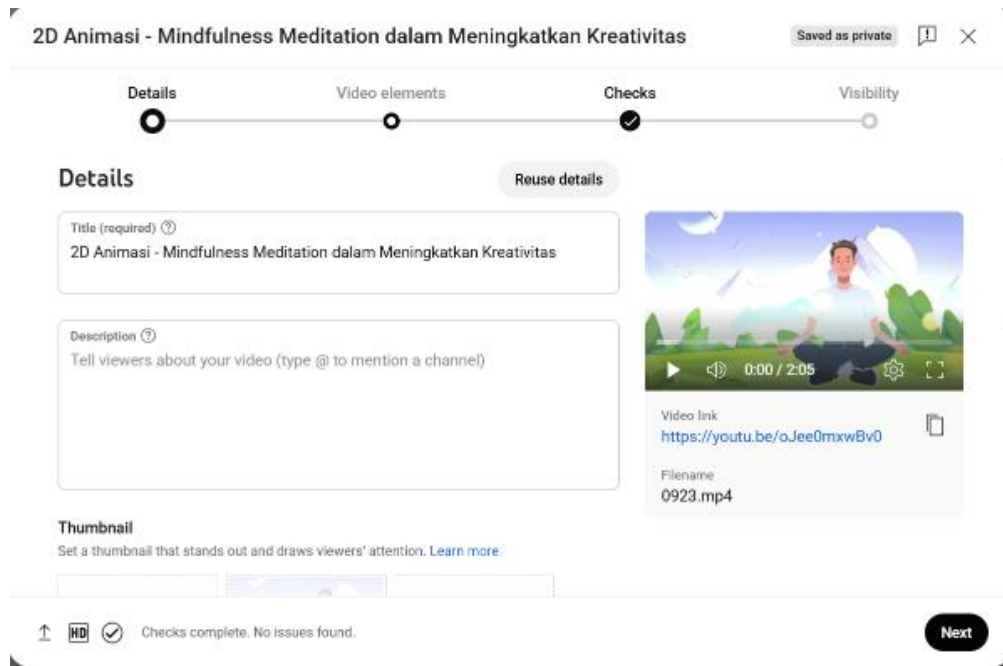


Figure 4. Video distribution via Youtube

The results of interviews conducted during the beta testing phase are summarized as follows on Table 4. These findings describe participants’ perceptions and responses to the 2D mindfulness meditation animation, focusing on aspects of relaxation, creative motivation, synchronization, visual design, and instructional clarity.

Table 4. Findings from the Interview analysis

No.	Evaluation Aspects	Findings
1.	Effectiveness of the animation in helping relaxation and focus	Approximately 65% of respondents felt that the 2D mindfulness meditation animation helped them feel more relaxed and focused, although the effect was not entirely consistent for every individual. Some participants mentioned that the soft visuals and slow pacing were soothing, while others felt that the duration and storyline were too short to achieve a deeper state of calmness.
2.	Influence of the animation on motivation to generate creative ideas	Around 62% of respondents stated that the 2D animation slightly increased their motivation to think and create after watching, while the rest felt the effect was still limited. Some noted that the calm atmosphere following the meditation helped open their minds, though it was not strong enough to trigger new ideas significantly.
3.	Synchronization between narration and visual display	The majority of respondents (82%) rated the narration as being highly synchronized with the visual elements. The guide’s voice was soft and followed the rhythm of the animation’s motion, making it easy for viewers to follow the meditation instructions step by step. This synchronization made the meditation experience feel natural and enjoyable.
4.	Visual design in creating a meditative atmosphere	About 88% of respondents stated that the design of characters, backgrounds, and the visual elements effectively contributed to building a serene and meditative atmosphere. The use of pastel colors, peaceful character expressions, and simple visual compositions helped establish a positive and tranquil mood for the viewers.

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|---|--|
| 5. Clarity of meditation instructions in the 2D animation | Almost all respondents (90%) agreed that the meditation instructions were clearly delivered and easy to understand. The breathing guidance, such as “inhale slowly, hold, exhale,” was presented at a steady tempo and reinforced by supporting visuals. Viewers felt that the animation helped them follow the meditation steps easily, even for beginners. |
|---|--|

Based on the findings obtained from interviews and observations conducted during the beta testing phase, the 2D mindfulness meditation animation showed moderate perceived effectiveness in helping students achieve relaxation, focus, and creative readiness. The findings reveal that 65% of participants reported feeling calmer and more focused after watching the animation, while 62% stated that the animation slightly increased their motivation to think creatively. These results indicate that mindfulness-based digital media can serve as an effective introduction to relaxation techniques in higher education settings, particularly when supported by well-structured visual learning design (Carroll & Kop, 2016). The role of aesthetic and usability factors in shaping learners' perceptions of digital environments further supports this interpretation, as visual credibility and design coherence significantly influence perceived effectiveness (Ghai, 2022).

Participants emphasized that the animation's pastel colour palette, gentle narration, and slow pacing created a soothing atmosphere that supported the mindfulness experience. In particular, 82% of respondents found that the synchronization between narration and visual motion helped them follow the meditation process step by step. The harmony between the auditory and visual elements encouraged immersion and engagement, allowing viewers to focus on breathing and reflection without distraction. This multimodal alignment resonates with principles of enhanced visual design in virtual learning environments, which highlight the importance of aesthetic consistency and sensory integration in sustaining learner attention (Grant-Smith et al., n.d.). Similarly, 88% of participants rated the visual design—character expressions, simple backgrounds, and calm movements—as instrumental in creating a peaceful and meditative ambiance, reflecting how structured aesthetic elements can guide emotional and cognitive responses (Iandoli & Zollo, 2022; Liu, 2024).

Regarding instructional clarity, almost all respondents (90%) stated that the meditation guidance was delivered clearly and easy to understand. Breathing cues such as “inhale slowly, hold, exhale” were presented in a steady rhythm that aligned with the visual movement, enabling even beginners to follow the practice effectively. Such clarity in visual-verbal synchronization supports findings that design templates and structured visual communication influence decision-making and comprehension processes (Jeong, 2025). Moreover, the development of visual perception in educational materials has been shown to strengthen learners' interpretative and reflective capacities (Putra et al., 2024). However, several participants mentioned that the animation's short duration and lack of repeated guidance limited the depth of relaxation achieved. These findings suggest that while the 2D animation successfully delivered mindfulness content, its short exposure time constrained the potential for deeper meditative engagement, indicating the need for iterative design development models to optimize instructional impact (Miaomiao et al., 2024).

Observation results during the screening also supported the interview data. Most participants appeared attentive and calm while watching, showing relaxed facial expressions and stable posture throughout the session. Some were observed closing their eyes momentarily, following the breathing rhythm from the animation. After the viewing, participants actively shared reflections, expressing that the brief mindfulness session helped them regain focus and mental clarity before returning to their academic tasks. These behavioral indicators align with research emphasizing the role of edutainment-based video learning in fostering engagement and emotional connection (Othman et al., 2022), as well as studies linking aesthetic creative competency development with reflective learning processes (Sagun, 2025).

Overall, the interview and observation findings demonstrate that the animation was positively received and effectively facilitated relaxation and creative engagement among students. This finding aligns with previous research asserting that animation-based digital media can enhance emotional engagement and cognitive processing by combining visual and auditory cues (Hamdiyah & Puspitasari,

2023), particularly when aesthetic design elements are intentionally structured to shape perception and engagement (Ghai, 2022; Carroll & Kop, 2016). The integration of mindfulness within 2D animation also echoes the concept of edutainment proposed by Agustini et al. (2023), where learners can both gain knowledge and enjoy the experience simultaneously, supported by principles of immersive visual communication (Grant-Smith et al., n.d.; Iandoli & Zollo, 2022). Thus, mindfulness animation can be categorized as a form of interactive educational entertainment that not only informs but also nurtures well-being. The findings suggest that mindfulness animation may enhance creative readiness by temporarily reducing cognitive load and emotional tension, thereby allowing greater cognitive flexibility. This perspective is reinforced by scholarship highlighting the interconnection between aesthetic regulation, perception, and creative cognitive development (Liu, 2024; Sagun, 2025), aligning with theories linking emotional regulation and divergent thinking processes.

Compared with traditional mindfulness sessions that rely solely on verbal or textual guidance, animated media provide a multi-sensory experience that makes abstract mental processes more tangible. The visual cues in the animation, such as the transition from a stressed to a calm facial expression, serve as metaphors for emotional transformation, reinforcing the psychological effects of mindfulness practice. This multimodal representation aligns with research indicating that structured visual learning environments enhance comprehension and engagement by reducing cognitive ambiguity (Carroll & Kop, 2016). Moreover, aesthetic coherence and usability significantly shape learners' perception of digital learning experiences (Ghai, 2022), suggesting that well-designed 2D animation can amplify the perceived credibility and emotional resonance of mindfulness content. The contemplative nature of guided attention practices has also been shown to improve self-awareness and reflective capacity (Klatt, 2016), while stress-reduction interventions among university students contribute to improved resilience and interoceptive awareness (Aydemir et al., 2025). In this sense, the animation's visual transformation metaphor functions not merely as a design element but as a cognitive scaffold supporting emotional regulation processes that underlie creative readiness. Therefore, 2D animation can be seen as a bridge between conceptual learning and experiential understanding, especially for students unfamiliar with meditation practices.

The novelty of this research lies in the integration of mindfulness meditation with 2D animated media to enhance students' emotional and cognitive readiness. Unlike traditional mindfulness teaching methods, which rely on verbal or textual explanations, animation provides visual and auditory immersion that makes the experience more relatable and easier to internalize. This finding resonates with scholarship demonstrating that mindfulness practices can directly foster creative thinking in arts and design learning contexts (Henriksen et al., 2022). Empirical evidence further supports the link between mindfulness and creativity among university students, highlighting how attentional awareness and emotional balance contribute to innovative behaviors (Hoang et al., 2025). The aesthetic structuring of animated visuals also plays a crucial role in shaping perception and meaning-making processes (Kaushik, 2021; Mohammed, 2023), reinforcing how visual language influences psychological responses. In addition, aesthetic education research underscores the importance of integrating perception, emotion, and cognition within multimedia environments to deepen reflective engagement (Putro, 2020). The edutainment dimension of video-based learning further explains why animated mindfulness content can simultaneously support learning and emotional engagement (Othman et al., 2022). This study demonstrates that 2D mindfulness animation can serve as a supportive tool for stress management and creativity enhancement in higher education, particularly in addressing academic stress and mental fatigue frequently experienced by university students (Puspitasari, 2025). Universities can integrate such digital mindfulness content into orientation programs, mental health workshops, or creative learning modules to help students balance focus and emotional well-being. Furthermore, cultivating habits of mind that emphasize self-regulation and reflective thinking strengthens long-term academic resilience (Primahardani et al., 2023). From a pedagogical perspective, this study contributes to technology-enhanced pedagogy by demonstrating how emotional regulation strategies can be embedded into multimedia learning design to support cognitive readiness, aligning with multiliteracies frameworks that integrate digital engagement with meaning construction (Çolak, 2024). The interconnection between emotional regulation and creative flexibility is also supported by psychological

models explaining mechanisms for enhancing creativity through structured cognitive–affective interventions (Sharifovich, 2025).

This study has several limitations. The number of participants was limited to 20 students, and the evaluation focused on short-term effects immediately after the viewing session. The findings reflect short-term subjective responses after a single exposure, and therefore conclusions regarding long-term creativity enhancement should be interpreted cautiously. While short-term stress reduction has been documented in mindfulness-based interventions (Aydemir et al., 2025), sustained cognitive and emotional benefits often require repeated practice over time. Broader psychological well-being factors, such as sleep quality and mental recovery processes, may also mediate the long-term impact of mindfulness on creativity (Tadros et al., 2025). Long-term impacts on creativity and academic performance were not measured, and future research could involve a larger participant group, longitudinal data collection, and comparative testing between different animation types (e.g., 2D vs. 3D or interactive media). Additionally, further exploration of aesthetic creative competency development may provide deeper insight into how visual–emotional integration supports sustained creativity growth (Sagun, 2025). Despite these limitations, the findings strongly suggest that 2D mindfulness meditation animation is an effective and accessible medium for fostering relaxation, focus, and creative awareness among university students. By combining structured visual design principles, emotional regulation strategies, and immersive multimedia elements, this approach offers a scalable model for integrating well-being interventions into contemporary higher education environments.

CONCLUSION

This study demonstrates that 2D animation–based mindfulness meditation learning media have a moderate level of perceived effectiveness in helping students achieve a state of relaxation, focus, and creative readiness. Based on interviews with 20 respondents, the average positive response reached approximately 65%, indicating that the animation was fairly effective but still requires further development. Most participants stated that the soft visual presentation, pastel color scheme, and synchronization of audio and narration successfully created a calm and easy-to-follow meditative atmosphere. Respondents also noted that the meditation instructions were clear and easy to understand; however, the short duration of the animation and the lack of repeated guidance limited the depth of relaxation achieved. Nevertheless, the majority of participants reported an increase in motivation and creative thinking after engaging in this brief mindfulness animation.

The findings confirm that 2D animation can serve as an effective medium for introducing the concept of mindfulness to non-psychology students while fostering awareness of the importance of emotional balance in the creative thinking process. However, its perceived effectiveness could be enhanced by extending the meditation duration, adding reflective elements, and integrating interactive features to create a more immersive mindfulness experience. Therefore, future research is recommended to develop an animation medium with a longer meditation structure, combined with interactive components such as guided breathing timers or reflection prompts, and to experimentally test its effect on enhancing students' creativity across various academic disciplines. These findings emphasize the importance of integrating emotional well-being and creativity into digital learning innovations in higher education.

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