

UTILIZATION OF AI IN DEVELOPING PROMOTIONAL MEDIA AS A STRATEGY TO ENHANCE CREATIVITY IN THE CREATIVE ECONOMY SECTOR

Kiagus Mohamad Salman Alfarisi*, Andi Muhammad Ilham Saputra, Muhammad Lutfi Kurniawan

Sriwijaya State Polytechnic, Srijaya Negara Street, Bukit Lama, Ilir Barat I District, Palembang, South Sumatera

*Corresponding author: msalmanalfarisi94@gmail.com

Abstract

Artificial Intelligence (AI) has revolutionized how businesses create effective and engaging promotional media. This study focuses on the role of AI in developing animation-based promotional media to support digital marketing strategies. The primary objective is to explore how AI can enhance production efficiency, audience engagement, and brand image through innovative promotional content. The research employs a combination of literature review and experimentation using AI tools such as Runway ML and Leonardo AI to produce promotional animations. Testing was conducted to evaluate the visual quality, message relevance, and audience response to the AI-generated promotional media. The findings reveal that AI enables faster and more cost-efficient animation production without compromising quality. AI-driven promotional media were proven to capture audience attention more effectively through personalized approaches that address specific needs and preferences. However, challenges persist, including limited access to advanced AI technologies, the need for technical expertise, and ethical concerns related to content ownership and transparency. Despite these challenges, AI's potential as a creative tool in the promotional industry remains significant, especially amid increasing competition in the digital landscape. This study provides practical insights for business practitioners to strategically leverage AI in creating innovative, effective, and relevant promotional media to boost their competitiveness in the global market.

Keywords: Animation, Artificial intelligence, Digital marketing, Innovation, Promotional media.

INTRODUCTION

The current economic development in Indonesia heavily relies on the latest digital-based technologies, known as the Industry 4.0 era. This era is transforming the industrial paradigm by integrating technology to build a digital economy, creating more efficient, flexible, and connected production systems, and providing positive social impacts. The digital economy currently plays a crucial role in accelerating, reducing costs, and enhancing the effectiveness of economic transactions, which ultimately increases productivity and the efficiency of business processes. The digital economy encompasses sectors that rely on digital technology in the development, production, sale, or distribution of goods and services (Suwarni *et al.*, 2019), making technologies such as the internet, cloud, and software the main foundations of various economic activities to support the Industry 4.0 era.

The Industry 4.0 era also has a significant impact on the creative economy sector by encouraging increased creativity and innovation. Advanced technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), and robotics accelerate the development of this industry, thereby increasing the potential of the creative economy and positively impacting both the national and global economies. The creativity and innovation generated in the creative industry also support

this development. Digital technologies like AI assist the creative economy sector in creating innovative products by utilizing big data and technological analysis. ((OECD), 2020).

Animation-based promotional media is a tool that uses moving images with sound, such as videos or cartoons, to convey information and clarify messages in the teaching and learning process. The use of animation based on digital technology enhances the effectiveness of conveying information visually, especially in the education and promotion sectors. (Suwarni, 2019). This animation is effective in conveying information visually and helps improve students' understanding and memory retention. With the help of AI, the animation creation process becomes more innovative and efficient, producing engaging and interactive content tailored to individual materials and learning styles.

LITERATURE REVIEW

Creative economy is a concept for realizing sustainable economic development based on creativity. The utilization of resources that are not only renewable but even unlimited, such as ideas, concepts, talents, and creativity. The economic value of a product or service in the creative era is no longer determined by raw materials or production systems as in the industrial era, but rather by the utilization of creativity and the creation of innovations through the advancement of technology. (Irma R.A. 2020). Quoting from the Creative Economy Blueprint 2025, the creative economy is a value-added creation (economic, social, cultural, environmental) based on ideas that arise from the creativity of human resources (creative people) and the utilization of knowledge, including cultural heritage and technology.

The creative industry in Indonesia plays an important role in the country's economic development. The creative industry is an industrial sector that utilizes individual creativity, skills, and talents to create welfare and jobs through the generation of creativity, skills, and talent. According to data from Kemenparekraf (Ministry of Tourism and Creative Economy), in 2019 the creative economy sub-sector contributed Rp. 1,153.4 trillion to GDP (Gross Domestic Product) or 7.3% of the total national GDP, 15.2% of the workforce, and 11.9% of exports. Currently, there are approximately 8.2 million creative businesses in Indonesia. Most of them are dominated by 4 sub-sectors, namely culinary businesses, fashion, and crafts. In addition, the creative economy with the fastest growth includes film, animation, and video, performing arts, and visual communication design. The rapid growth of the creative sector is supported by the increasing adoption of technology in society. (Lestari, Anggraini, Ratu, & Purnamasari, 2022). AI (Artificial Intelligence) is a field of computer science that focuses on the development of systems that can mimic human intelligence. AI involves the use of algorithms and computational techniques to enable machines or computers to "learn" from data, analyze information, make decisions, and perform tasks that require intelligent thinking. (Hanifa,Ahmad S & Febriyanti Ayunda,2023).

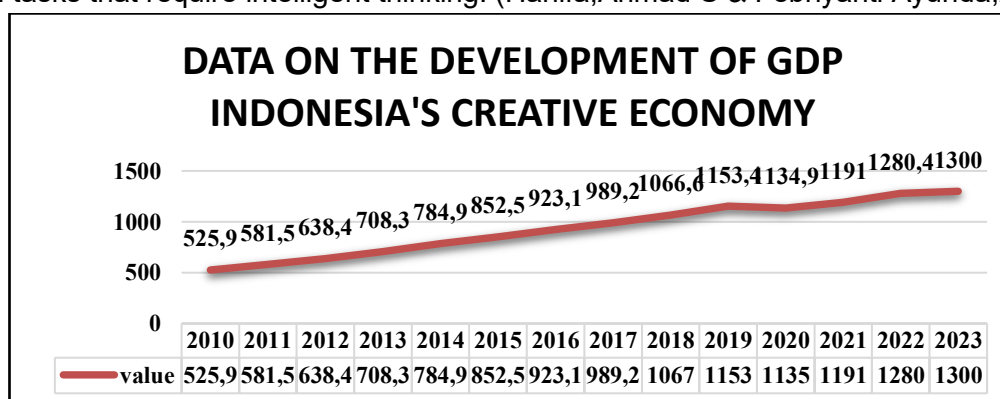


Figure 1. Data on the development of Indonesia's creative economy GDP
Source: Kemenparekraf (processed by the author)

AI has various approaches and techniques, including machine learning, deep learning, fuzzy logic, and expert systems. Machine learning is a branch of AI that focuses on developing algorithms that can learn independently from data and improve their performance over time. Deep learning is a method of machine learning that uses artificial neural networks with many layers to process and understand complex data. (Gasmi *et al.*, 2022).

In an article titled "An Extended AI-Experience: Industry 5.0 in Creative Product Innovation," it is mentioned that AI can influence the creative industry by integrating VR and AI technology to create a new and innovative brainstorming environment. In this environment, AI can provide support in the form of intelligent information search and extraction. Additionally, more advanced human interaction through body movement tracking, speech recognition algorithms, and natural language processing. AI can also assist in the classification and organization of creative stimuli such as product images, 3D assets, and patents, as well as provide access to previous designs and concepts that can be used as references in the ideation process (Grech *et al.*, 2023). Animation is a cutting-edge learning tool that teachers can use to assist students in their learning process. (Alannasir, 2016). Animation as a technology-based learning medium can provide significant contributions. (Cahyani, 2020). Animation has a strong visual and audio appeal, capable of stimulating students' imagination and creativity. With the proper use of animation, difficult or abstract learning materials can be conveyed in a way that is easier for students to understand. Animation can also present information interactively, allowing students to actively participate in the learning process (Yuliansah, 2018).



Figure 2. Flowchart for creating animations using AI
Source: processed by the Author

Animation provides an engaging and enjoyable learning experience, which in turn increases students' involvement and interest in the learning material. (Winastiti *et al.*, 2012). Additionally, animation can motivate students by delivering relevant and contextual content, presenting stories or scenarios that evoke students' emotions, and providing immediate feedback. (Susilo & Widiya, 2021). The relationship between AI and animation involves the application of deep learning to animation data or animated images. Currently, major companies in the animation industry such as Disney and Pixar are developing AI-based methods for techniques like face swapping, realistic image creation, and 2D character animation automation. The increasing automation and generativity in digital animation raise various questions about the characteristics and future of animation, including new aesthetics, changes in the role of animators, and the concepts of creativity and expression. The increasing importance of data and the debate between randomness and control in AI animation add to its complexity. The increasingly accessible technology allows more new players to get involved in animation creation, while the complex techniques create challenges and mysteries that need to be further explored. Furthermore, the epistemological and ethical aspects of increasingly complex animation technology also need to be researched, considering the growing importance of animation in the information culture. The use of AI in animation production has also simplified the process with text models that can be automatically converted into animations. Research shows that 90% of educational technology students are already familiar with AI, and 50% of them use AI to assist with learning tasks because AI can process text and

narration quickly, easily, and realistically. This enables the creation of more interactive and dynamic learning materials, as well as more complex and detailed animations. Thus, AI has become very important in the animation industry for creating effective learning media, as it simplifies the production process, improves content quality, and enhances audience engagement in the learning process.

Tabel. 1 Previous journal on AI-based learning media

year of publication	Researcher	Method	Result or conclusion
2024	Stellarosa Yolanda, dkk	Qualitative Descriptive	This training successfully improved the participants' understanding and skills in creating AI-based educational videos and public speaking. Although there were obstacles such as limited English proficiency in using the AI program, this training showed significant improvement in the participants' skills. The follow-up plan includes advanced training and video development for various other health issues.
2023	Prasetyawan Adi, dkk	Dissemination	This work concludes that the utilization of social media and AI provides an effective alternative for library promotion in the digital era. The implementation of digital technology is an important step to ensure that libraries remain relevant as sources of information in the modern era.
2021	Tirta Putri, Lintang., dkk	Conceptual	The Industrial Revolution 4.0 to 5.0 advances the use of Artificial Intelligence (AI) in advertising, offering high efficiency and personalization. However, AI also triggers challenges such as unemployment, the fading of art, and cultural changes. Although beneficial, human creativity and empathy remain irreplaceable, so the use of AI needs to be controlled wisely to maximize its positive impact.
2023	Akhmad aulianshah, Kiagoos	Qualitative Descriptive	This journal discusses the use of artificial intelligence (AI) technology in promotional media illustrations and the impact it causes. The use of AI in illustrations has sparked both pros and cons in society, particularly in social, cultural, and aesthetic aspects.

RESEARCH METHOD

The research method used by the author in this study is a literature review. The author collected data and information from various previous studies that discuss the use of AI (Artificial Intelligence) in creating animations as promotional media. With this method, the author analyzes and evaluates the existing findings to identify research gaps that have not been extensively discussed, thereby opening opportunities for further research in the field. The gap found in previous research is the use of AI as a promotional medium that is limited to prompt creation, without any specific focus on animation creation as a promotional medium. Additionally, there is a lack of exploration into audience engagement in the creation of AI-based advertisements. This gap has prompted the author to delve deeper into the utilization of AI in creating animations as promotional media, thereby enhancing the effectiveness and efficiency for business operators in promoting their products.

RESULTS AND DISCUSSION

The use of AI in the creation of animated videos is becoming increasingly popular and effective. AI can enhance the quality and realism of animations by learning from large animation datasets. Platforms like Animaker, Runway ML, and Synthesia make it easy for users to create animated videos without needing special skills. They provide features such as various video formats, character options, backgrounds, effects, animated text, and music. AI also helps save time and costs by automating tasks, and AI can improve efficiency in animation production by automating processes such as text-to-animation. (Sharma, 2020). Additionally, AI can create large quantities of animations quickly, which is useful for large projects. Consistency in animation quality is also important for maintaining brand identity. Thus, AI makes the production of animated videos faster, cheaper, and of higher quality. In utilizing AI (Artificial Intelligence) as a better promotional medium, the author uses several sites among them:

1. Chat GPT is a chatbot technology that uses artificial intelligence (AI) to enable conversations between humans and machines, which is used to create animation scripts before being processed into Generative AI. ChatGPT is used to generate initial scripts that can be developed into animations with other AI tools. (Nwana, 2023).
2. Leonardo AI is a tool that combines artificial intelligence with art, creating a new understanding of what is possible in visual creation. By using Leonardo.AI, users transfer narrative scripts created by ChatGPT to Leonardo to create animations and open the door to creativity through features such as Image Generation, AI Canvas, and 3D Texture Generation. The use of AI like Runway ML and Leonardo.AI in animation production helps generate innovative content, but ethical and copyright challenges remain a concern.
3. Runway ML is an innovative platform that offers image creation capabilities developed by Leonardo.AI and extracts them into video form Artlist is a platform that provides creative assets for content creators, such as music, sound effects, stock footage, video templates, and editing software. After the video is completed, sound is added with the help of the Artlist system.
4. CapCut is a video editing application designed to make it easy for users to create engaging and professional video content directly from their mobile devices. CapCut is a video editing application designed to make it easy for users to create engaging and professional video content directly from their mobile devices. Developed by ByteDance, the same company behind the popular social media platform TikTok, CapCut offers a variety of advanced, user-friendly editing features, including video trimming, clip merging, text addition, music, effects, and filters. After the video is in its final form and has sound, the last step is using the CapCut application to edit the raw video so that it is more enjoyable to watch. Applications like CapCut offer user-friendly editing with the help of AI to produce high-quality videos. (Tan, 2022).

The use of AI in the creation of animated videos in Indonesia faces several obstacles and challenges. One of the main challenges is the limited technological infrastructure, such as slow internet networks and inadequate data centers. In addition, access to quality data also becomes an issue because the existing data is often incomplete, unstructured, or inaccurate. The use of AI in the creative context also raises ethical debates, particularly concerning plagiarism and copyright, which are of concern to artists and illustrators. Although AI can accelerate and enhance the quality of animation, it is important to apply it ethically and effectively in scientific research to avoid becoming overly dependent on technology. Therefore, the development of AI technology in video animation production offers advantages in terms of speed and realism, but it also requires solutions to address various existing challenges.

The integration of AI with human creativity produces more realistic and innovative animations. (Smith, 2019). To optimize the use of generative AI in the creation of animated videos in the future,

several important strategies need to be implemented. Improving technological infrastructure such as better internet networks and data centers will accelerate the process and enhance the quality of animations. The collection and management of high-quality data are crucial to ensure accurate and relevant results. The development of more sophisticated and continuous algorithms will enhance AI's ability to create more complex and realistic animations. Additionally, it is important to integrate clear ethical guidelines and copyright to respect the authenticity and rights of artists. Training and education for professionals in the animation industry regarding the use of AI will also help maximize the potential of this technology. Collaboration between technology companies, animation studios, and educational institutions will accelerate the adoption and development of technology. Integrating AI with elements of human creativity and focusing on the development of intuitive interfaces can enhance the user experience. Additionally, exploring the use of AI in various other industries can uncover innovative ways to leverage this technology. By implementing these strategies, generative AI can be optimized to produce higher quality, more creative, and more efficient animated content.

CONCLUSION

The utilization of artificial intelligence (AI) in the creation of animated videos offers various benefits, such as improved quality, efficiency, and consistency. AI can accelerate the animation production process, save time and costs, and produce more realistic and complex content. However, challenges such as limited technological infrastructure, access to quality data, and ethical debates related to copyright need to be addressed. The development of more sophisticated algorithms, infrastructure improvements, and the implementation of clear ethical guidelines are important steps to optimize the use of AI in the animation industry. We recommend that the relevant government authorities improve internet networks and data centers to support the greater processing needs of AI and implement clear ethical guidelines and copyright policies to ensure AI users respect copyright and originality.

ACKNOWLEDGEMENT

The author expresses deep gratitude to Mrs. Ketj Purnamasari, as the supervising lecturer, for her guidance, patient direction, and moral support provided during the research and writing process of this scientific work. The author also expresses gratitude to all parties who have made significant contributions to this research, both in providing research materials and in facilitating the smooth progress of the research. The cooperation and dedication provided greatly supported the achievement of optimal research results. In addition, the author also expresses gratitude to various other parties who have provided support, suggestions, and research facilities, both directly and indirectly. May the assistance provided be a good deed, and may this written work benefit readers and contribute to the development of knowledge, particularly in the field of utilizing AI in animation creation as a promotional medium.

REFERENCES

- (OECD), O. f.-o. (2020). Digital innovation in creative industries. *Paris: OECD Publishing*.
- Ahdia, A. (2024, 11 20). *Nilai PDB Ekonomi Kreatif Indonesia Meningkat Usai Pandemi*. Retrieved from Databoks: <https://databoks.katadata.co.id/datapublish/2024/04/25/nilai-pdb-ekonomi-kreatif-indonesia-meningkat-usai-pandemi>
- Akhmad Auliansahah, K. (2023). Tinjauan dan Respons Kreatif Terhadap Penggunaan AI dalam Ilustrasi Media Promosi dan Dampak yang Ditimbulkannya. *Institut Kesenian Jakarta*.

- Hanifa, D. (2023). Peran AI terhadap kinerja Industri kreatif di Indonesia. *Journal of Comprehensive Science*, Vol. 2, No. 7.
- Nwana, H. S. (2023). ChatGPT and beyond: Using natural language processing in creative workflows. *AI & Society*.
- Prasetyawan, A. d. (2023). Pemanfaatan Media Sosial dan Kecerdasan Buatan Sebagai Strategi Pemasaran Perpustakaan di Era Digital. *Jurnal Kajian Perpustakaan dan Informasi*, Vol. 7 No.2 Hal. 165-179.
- Sharma, M. &. (2020). AI-powered video production tools: A revolution in creative media. *Journal of Media Innovations*.
- Smith, J. D. (2019). AI and the future of animation: Integrating technology with human creativity. *International Journal of Media Production*.
- Stellarosa, A. (2024). Penerapan Artificial Intelligence Serial Video Animasi Sukacanting dan Pelatihan Kemampuan Komunika. *Jurnal Pengabdian Kepada Masyarakat*, Vol. 7 No. 2.
- Suwarni, A. e. (2019). Media animasi sebagai alat pembelajaran interaktif. *Jurnal Pendidikan dan Teknologi*, 123-135.
- Tan, K. &. (2022). Enhancing user experience in video editing applications with AI. *Journal of User Experience Design*.
- Tirta Putri, L. (2021). Tren Teknologi Artificial Intelligence Pengganti Model Iklan di Masa depan. *Jurnal Sosial Politika*, Vol. 2 No. 2.
- Vincent, J. (2022). Generative AI in creative industries: Challenges and opportunities. *Artificial Intelligence Review*.