Smart Techno (Smart Technology, Informatic, and Technopreneurship)
Volume 7, Number 1, 2025 pp. 18-28
E-ISSN : 2541-0679
Open Access: https://lppm.primakara.ac.id/jurnal/index.php/smart-techno/

The Implementation of Copilot-Based Artificial Intelligence (AI) Through Collage Techniques in Illustration Design

Dharma Prasetya Irawan[1*], I Gede Wirya Mahendra Nandanawana Putra[2], Nauzidan Zakka Ramadhan[3], Kadek Darma Weda Wisesa[4]
[1,2,3] Visual Communication Design, Primakara University, Denpasar, Indonesia
[4]Digital Business, Primakara University, Denpasar, Indonesia

ARTICLE INFO
Article history:
Initial submission
29-01-2025
Received in revised form
11-02-2025
Accepted 18-02-2025
Available online 19-02-2025

Keywords:
Artificial Intelligence (AI), Copilot, Collage Technique, Illustration Design, Creative Industry

DOI:
ttps://doi.org/10.59356/smart-techno.v7i1.147

ABSTRACT

The development of artificial intelligence (AI)-based illustrations, specifically using Copilot, in the creative industry has had a significant impact, opening new opportunities for designers to create visual works more efficiently and innovatively. The advantage of AI in analyzing and generating images makes the creative process faster and more varied. As this technology evolves, I am interested in developing a collaboration between AI-based collage techniques and illustration design. This research uses a descriptive analysis approach that combines observation, interviews/questionnaires, documentation, and literature study. Observations are made on the AI processes that I have created. Additionally, questionnaires are distributed to students from the Visual Communication Design department at Universitas Primakara to assess the importance and benefits of this technique in completing their assignments. The results of this research are expected to provide insights into whether this technique can help enhance creativity and efficiency in creating illustration designs, as well as contribute to the development of a more innovative creative industry.

1. INTRODUCTION

Artificial Intelligence (AI) has revolutionized various sectors within the realm of technology, and one area significantly impacted is the creative industry (Herlijanto, 2024), particularly in the fields of art and graphic design. Specifically, in illustration development, AI has the potential to accelerate and simplify the creative process, offering designers greater flexibility to explore new ideas more efficiently (Prihartanto & Halimawan, 2024).

As AI adoption continues to grow rapidly in the design world, it becomes increasingly important to examine how this technology can collaborate in producing more innovative and engaging visual works. Within this context, the present study aims to explore the application of AI-based collage techniques in supporting visual creativity.

Automated visual collage creation, which involves the ability to analyze and combine various image elements—tasks that traditionally required manual effort—presents a new frontier in design practice. To gain a deeper understanding of how AI-based tools are perceived in collaboration with traditional collage techniques, this research involved the creation of an artwork that integrates both human creative input and AI capabilities. This work then served as the object of assessment through a questionnaire distributed to Visual Communication Design (VCD) students at Primakara University. Primakara Visual Communication Design (VCD) students were selected as participants due to their relevant background in visual arts, their immersion in a creative environment that fosters technological innovation, and their diverse perspectives (Rachmad et al., 2024). They represent an ideal group, as VCD students possess a solid foundational knowledge of graphic design, illustration, and visual creative processes. Accustomed to using various design tools and techniques, these students are well-equipped to understand and engage with emerging technologies such as AI in collaborative design practices. Their involvement is essential not only for evaluating the collaboration

* Corresponding Author: Dharma Prasetya Irawan: dharmaprasetya@primakara.ac.id

between AI and human creativity but also for supporting the integration of the research findings into design education.

The questionnaire was designed to explore students' experiences, challenges, and perspectives regarding the use of AI in the creative design process. This approach aims not only to generate relevant empirical data but also to offer new insights into how human-AI collaboration can enrich the field of graphic design. The results are expected to open up broader opportunities for creative exploration within the creative industry and contribute significantly to the development of visual communication design. Key aspects examined include user demographics, encompassing how different age groups, backgrounds, and levels of design experience respond to the integration of AI in the creative process (Ifadhila et al., 2024). Additionally, the study investigates emerging design preferences influenced by the use of AI technologies, as well as the impact of AI on the overall process of visual creation.

Although the application of Artificial Intelligence (AI) in the creative industry—particularly in graphic design—has begun to accelerate the creative process, there remains a lack of in-depth studies focusing on the collaboration between AI technologies and traditional design techniques, such as collage. Previous research has predominantly centered on the implementation of AI in automated and generative design practices, such as in Fathe Hibatukwan's journal article titled "The Phenomenon of Generative AI Use in Information-Seeking Behavior" (Hibatulwafi & Laksmi, 2024). However, few have examined how AI-assisted collage techniques can enhance visual creativity and influence designers' creative processes, especially within the context of visual communication design. Moreover, there is a limited body of research exploring the perspectives of Visual Communication Design (VCD) students and professional designers in using AI as a collaborative tool in design practices. This presents a gap that calls for further investigation into user acceptance, encountered challenges, and the creative potential that can emerge from human-AI collaboration.

2. LITERATURE REVIEW

A. Illustration

Illustration is a visual medium that serves to convey information, clarify messages, and enhance the aesthetic quality of a work (Andhita, 2021). Illustrations can be created using traditional techniques—such as manual drawing with pencils or watercolor—as well as digital methods that utilize design software. Across various fields such as literature, advertising, and engineering, illustration plays a crucial role both as a communication tool and as an aesthetic element. For instance, in children's literature, illustrations help bring stories to life, while in advertising, they reinforce branding and deliver visual messages in an emotionally resonant manner (Priyono et al., 2023).

The research titled "Innovation of AI-Based Collage Techniques to Support Visual Creativity in Illustration Design" is closely related to the core function of illustration as a visual medium for conveying ideas and generating appeal. Collage techniques, which involve the combination of various visual elements, represent one approach in illustration that enables the creation of unique and engaging works. Collage illustration allows for broader creative exploration by blending textures, colors, and imagery from diverse sources. With innovations in collage techniques, illustrations can more effectively support various design needs—such as creating visuals that align with cultural trends and communicating strong visual messages.

B. Artificial Intelligence

Artificial Intelligence (AI) has been a significant topic of research since its introduction in the mid-20th century, primarily due to its potential to revolutionize various aspects of human life (Rachmad et al., 2024). AI is a branch of computer science focused on developing systems or machines capable of performing tasks that typically require human intelligence (Malau et al., 2024).

The visual work produced in this study utilizes technology powered by Copilot. Copilot employs AI based on Natural Language Processing (NLP) through the Generative Pre-trained Transformer (GPT) model, developed by OpenAI. This model is built upon the Transformer architecture and uses a Self-Attention Mechanism to understand the context and relationships between words in textual input. While AI offers numerous advantages, its use in the creative industry has sparked ongoing debate. According to Rizqya Nafila Putri's academic journal, copyright ownership of AI-generated artworks remains a legal grey area. Questions persist regarding whether the rights belong to the AI developer, the user, or the AI system itself. Current copyright laws do not explicitly address the involvement of AI, even though its use can eliminate the need for traditional artistic skills—potentially diminishing appreciation for human creativity (Rahmahafida & Sinag, 2022).

C. Collage

The collage technique incorporating illustration is a creative method that combines photographic elements with illustration to produce visually distinctive and engaging works. This approach is commonly employed in graphic design, editorial content, and conceptual art due to its ability to blend photographic realism with the expressive qualities of illustrative styles. Such integration enables artists and designers to communicate complex ideas through a unique visual aesthetic (Alfian, 2023).

This technique often involves the use of AI-generated imagery as the foundational or primary components, which are subsequently redrawn using digital illustration software, such as Clip Studio Paint. This process allows for enhanced artistic control and the development of a personalized, expressive style that bridges computational generation and manual refinement.

3. METHOD

The research method employed in this study is a descriptive qualitative approach, aimed at understanding and illustrating phenomena based on the data collected. This approach involves processes such as observation, documentation, and literature review, in alignment with the research framework outlined in the diagram.

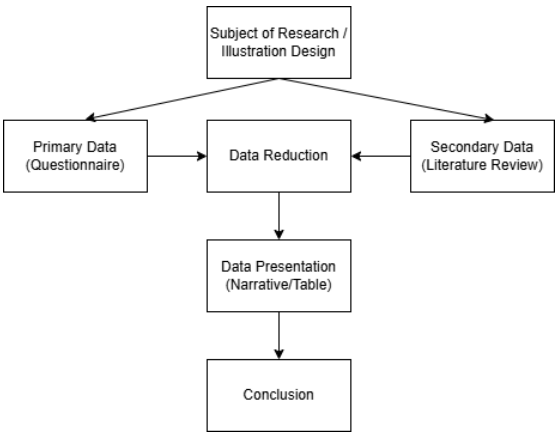

Figure 1. Research flowchart

The process began with the initial AI-generated illustration design. I conducted data collection using both primary data (questionnaires) and secondary data (literature), followed by a data reduction process to filter relevant information. Additionally, documentation served as a secondary data source, supporting the data reduction stage.

After the data were reduced, the information was presented in narrative or tabular form to facilitate analysis and comparison with existing theories. In the final stage, the presented

data were further analyzed to draw conclusions aligned with the research objectives. This approach allows the researcher to gain a deeper understanding of the research subject through multiple data sources.

A. Subject: Illustration Design

The primary subject of this study is illustration design created through a combination of artificial intelligence (AI) technologies. The design process was carried out using collage techniques, in which multiple AI-generated visual elements were combined into a single composition. Subsequently, the illustration was refined through a redraw process, also assisted by AI tools, to achieve a more polished result aligned with the intended purpose.

The main object depicted in the illustration is a chibi character, which serves as a visual element in the assessment of student assignments at Primakara University. The following section presents the final illustration designs produced for this study.

Figure 2. Collage Illustration Design Result

This design consists of four items. I created four different illustrations intended for use in the assessment of students' final assignments. Each design features a distinct variation, corresponding to the students' grades: 85, 90, 95, and 100. The design process began with concept generation using Copilot, followed by a collage composition stage, and finalized through a redraw phase in Clip Studio Paint to refine the illustrations.The use of AI-assisted design in this context aims to explore the extent to which AI can contribute to the creation of relevant and high-quality illustrations for academic purposes.

B. Primary Data: Questionnaire

Primary data were collected through a questionnaire. The questionnaire served as a data collection tool using a survey method to gather respondents' opinions. It was distributed to participants via messages sent through a WhatsApp group representing the student cohort. The questionnaire was targeted at Visual Communication Design (VCD) students at Primakara University. A total of 20 students were asked to complete the questionnaire.

This study employed a descriptive qualitative method, focusing on key aspects including demographics, AI usage, design preferences, and evaluation criteria. The results from the primary data were then analyzed and compared with secondary data obtained from three relevant articles, in order to strengthen the analysis and discussion presented in this research.

C. Secondary Data: Literature

This study also utilizes secondary data obtained from various references and literature reviews related to AI-based design. Three key sources were compared, including Haifa Putri

Budi's article titled "Analysis of the Impact of Artificial Intelligence (AI) in Political Campaigns on Art Illustrators" (Budi et al., 2024), Ine Rachmawati's article titled "Application of Artificial Intelligence in Graphic Design Media Using Edmund Feldman's Interpretation Analysis" (Rachmawati et al., 2024), and Kiagoos Akhmad Aulianshah's article titled "Review and Creative Response to the Use of AI in Promotional Media Illustration and Its Impact" (Aulianshah, 2023). These sources serve as benchmarks and theoretical foundations for analyzing whether the AI-generated illustrations align with design principles established in previous research.

D. Data Reduction

Data reduction aims to filter and select the most relevant information while eliminating insignificant or excessive data. During this stage, the responses from the questionnaire were analyzed to identify patterns or trends in student feedback. Simultaneously, information from the literature was compared with the questionnaire results to assess the alignment between theoretical concepts and the practical use of AI-based illustrations.

The results of this data reduction process provide a clearer understanding of the effectiveness of AI-based illustration designs in the academic context, as well as the extent to which students are able to accept and utilize them in their assignments.

E. Data Presentation

The data presentation in descriptive form is used to explain the research findings, including the analysis of the questionnaire results and the alignment of the designs based on the literature review. The data is also presented in tabular form to summarize key information, such as the percentage of students who found the design relevant or not, as well as a comparison between the questionnaire findings and theoretical concepts from the literature. With a systematic presentation format, the research results become easier to understand and analyze, enabling more accurate conclusions to be drawn.

4. RESULT AND DISCUSSION

A. Illustration Design

The creation of the illustration design in this study was carried out using an AI-based approach, where the initial process began with generating images through the Copilot technology, which converts text into illustrations.

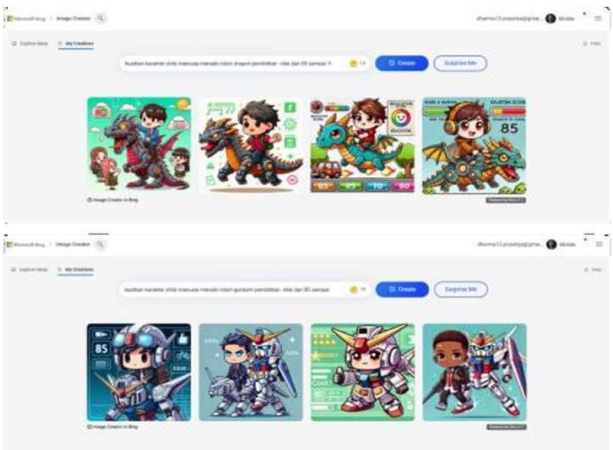

Figure 3. Conversion from Text to Image via Copilot

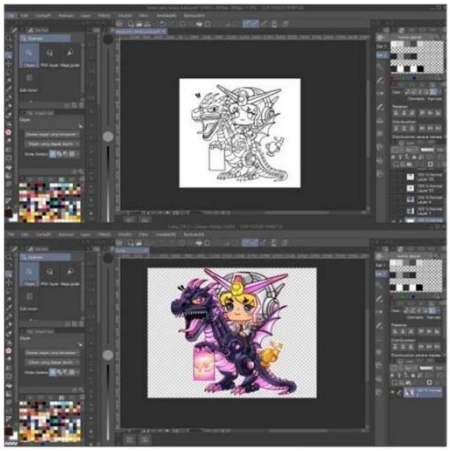

Figure 4. Stages of Artwork Creation: From Collage Formation to Illustration

In the initial stage, various elements such as a mechanical dragon, a character with a Gundam helmet, and the character's body dressed as an adventurer were selected. These elements were then cut and rearranged in a collage format to achieve a composition using Clip Studio Paint. Afterward, the main character was merged with the dragon to create a more cohesive illustration. Color modifications were made, shifting from red to a purple-pink hue, and additional details, such as light effects and a trophy, were incorporated to enhance the aesthetic appeal and visual quality. The final result was assigned a score of 95, based on the level of detail and the overall quality of the illustration produced. The following is the assessment rubric used for evaluation.

Tabel 1. Table Assessment Rubric

Criteria	Score	Mark
Details	1-20	20
Color	1-20	20
Creativity	1-20	20
Quality	1-20	20
Communication	1-20	15
	Total	95

Figure 5. Illustration Refinement Process Using Clip Studio Paint

The redraw process using Clip Studio Paint was conducted as the final stage in refining the illustration after the main elements were generated and composed into a collage. During this stage, the initial sketch was refined by redrawing specific parts to ensure more accurate proportions and visual details. This was followed by shape modifications and adjustments to visual elements, including enhanced character expressions, anatomical corrections, and added details to the dragon's texture and mechanical equipment.

The next step involved recoloring using a more harmonious color palette, where the original red tones were shifted to a purple-pink combination to create a more futuristic and vibrant impression. Shading and highlights were also added using airbrush and gradient techniques to produce more dynamic lighting effects.

B. Data Reduction

During the data filtering process, primary data were collected directly from respondents through a questionnaire developed based on four main categories: Demographics, to determine respondents' age and study program in relation to visual communication design (VCD) and illustration; AI Usage, aligned with the research objective; Design Preferences, which explore their design capabilities; and Evaluation, to assess whether the research was considered beneficial. These categories were constructed based on Vika Naili Sa'Adah's article, which states that AI-based design provides tools and technologies that enhance students' creativity, such as graphic design software that offers design suggestions, automates repetitive tasks, generates new creative ideas, and supports the improvement of students' technical skills (Sa'adah et al., 2024). These categories were translated into specific questionnaire items and distributed via Google Forms. The questionnaire items included:

- Demographics: Name, Age, Visual Communication Design Program, Current Semester, Occupation.
- AI Usage: Have you ever generated images/illustrations using AI? What do you understand by image/illustration generation? How frequently do you use AI-based image/illustration generation tools?
- Design Preferences: What are the main challenges you face when creating illustration designs? To what extent do you agree that AI can accelerate the illustration design process? Do you believe this AI-collage-to-illustration method supports creativity? How satisfied are you with the AI-generated illustrations? Do you feel that AI reduces the role of manual creativity? Does the AI collage method help you in exploring visual styles for your illustration work?
- Evaluation: What are your suggestions for improving this collage technique in your illustration design process? (You may answer (-) if none.) If applicable, what interesting experiences have you had using AI in your design process? (You may answer (-) if none.)

On the other hand, secondary data were obtained through the review and analysis of three journal articles related to AI-generated illustrations. These articles serve as the theoretical foundation for understanding how AI is applied in generating illustrations, as well as the extent to which the outcomes are considered relevant and of high quality in various fields such as art, graphic design, and the creative industry.

The first article, by Haifa Putri Budi, titled "Analysis of the Impact of Artificial Intelligence (AI) Usage in Political Campaigns on Art Illustrators," explains that the development of AI fosters a harmonious collaboration between humans and technology, resulting in more diverse, original, and widely recognized visual artworks (Budi et al., 2024).

The second article, by Ine Rachmawati, titled "Application of Artificial Intelligence in Graphic Design Media Using Edmund Feldman's Interpretive Analysis," argues that while AI can generate aesthetically pleasing and functional designs, human intervention remains essential to ensure authenticity, context, and effective communication. Human sensitivity to

emotion, culture, and creativity continues to play a crucial role in producing compelling designs (Rachmawati et al., 2024).

The third article, by Kiagoos Akhmad Aulianshah, titled “A Review and Creative Response to the Use of AI in Promotional Media Illustration and Its Impacts,” notes that AI-generated visual art is often perceived as lacking uniqueness because its outputs can be replicated by other machines—unlike the distinctive character found in works by human artists. To address this concern, visual artists may adopt three strategic approaches: (1) being adaptive to AI developments and using them as collaborative tools in the creative process; (2) considering the social implications and public response, especially since AI remains controversial and is seen as disadvantageous by some; and (3) preserving artistic uniqueness, even when integrating AI, to maintain a strong sense of identity and aesthetic value in the final work (Aulianshah, 2023).

Based on the three perspectives, it can be concluded that AI is not a replacement for human creativity, but rather a tool that can support and accelerate the design process when used wisely. However, the successful application of AI in visual art depends largely on the extent to which artists are able to integrate it with a human touch—such as emotional understanding, cultural context, and unique aesthetic sensibilities that AI cannot fully replicate. Therefore, maintaining a balance between technological utility and manual creativity is a key factor in preserving the artistic value and originality of AI-assisted artworks.

C. Data Presentation

The results of the data reduction indicate that a total of 22 respondents participated in the study. This number is considered sufficient for validation in this research. According to Rezha in his article, there is no strict standard for the number of respondents required in qualitative research, and thus 22 participants can be considered valid for the purposes of this questionnaire-based study (Amalia & Dianingati, 2022). Although the sample size is relatively small, the selected respondents met specific criteria, such as experience or expertise in illustration design and AI technology, providing rich and meaningful data. These individuals possessed relevant knowledge or had prior experience using AI-generated tools. Therefore, despite the limited number, the sample is considered representative for exploring insights into innovation in illustration design involving AI. The questionnaire results are presented in tabular form. The data collected cover several aspects, including the frequency of AI usage, software utilized, challenges in illustration design, the perceived benefits of AI in the creative process, and its impact on the exploration of visual styles. These findings were then analyzed to identify patterns, trends, and deeper insights regarding the role of AI in enhancing the creativity of Visual Communication Design students at Primakara University. The following section presents the summarized results of the collected data.

Tabel 2. Table of Questionnaire Results Conducted Using Google Form

No	Category	Answer Summary
1	Age	A total of 21 respondents were in the 18–25 age group, whereas 1 respondent was under 18 years old
2	Program Studi	There were 22 participants from the Visual Communication Design program
3	Semester	There were 22 respondents in the first and second semesters.
4	Employment	Student
5	Have previously used Generative AI	21 respondents answered "Yes", while 1 respondent answered "No"

6	The AI-based software employed	ChatGPT (10 participants), Midjourney (3 participants), Leonardo.ai (2 participants), Adobe Firefly (2 participants), Copilot (2 participants), Bing AI (1 participant), and Meta AI (1 participant)
7	What is your understanding of image or illustration generation?	According to 22 respondents, generating images or illustrations through AI involves creating visuals from the given text (prompt).
8	Have you ever utilized AI to generate images or illustrations for your work?	13 respondents answered "Yes", while 9 respondent answered "No"
9	How frequently do you use AI-based image/illustration generation?	15 respondents stated that they had never done so, 6 respondents reported doing it several times a month, and 1 respondent stated that they did so once a week
10	What is your understanding of illustration design?	A total of 22 respondents agreed that illustration design is a visual creation intended to communicate ideas, concepts, messages, or stories.
11	What are the main challenges in creating illustration designs?	8 respondents stated that the initial sketch was important, 5 respondents emphasized coloring, 6 respondents focused on character expression, 1 respondent mentioned determining and organizing a concept, and 1 respondent highlighted the importance of applying or creating in digital media, while another respondent emphasized the role of ideas and precision.
12	To what extent do you agree that AI can accelerate the illustration design process?	7 respondents strongly agreed, 9 respondents agreed, and 6 respondents were neutral
13	Do you think the AI collage method used in this image illustration supports creativity?	2 respondents strongly agreed, 10 respondents agreed, and 10 respondents were neutral
14	How satisfied are you with the illustrations produced by AI?	2 respondents were very satisfied, 14 respondents were satisfied, and 6 respondents were neutral.
15	Do you feel that AI reduces the role of manual creativity?	2 respondents strongly agreed, 16 respondents agreed, and 4 respondents were neutral.
16	Does the use of AI collage techniques help you in exploring visual styles to support the creation of illustration works?	3 respondents strongly agreed, 18 respondents agreed, and 1 respondent was neutral
17	What are your suggestions for the development of this collage technique in advancing your illustration design? Please indicate (-) if you have no suggestions	Most respondents agreed that higher education contributes significantly to the development of skills and the application of work in digital media
18	What are your suggestions for the development of this collage technique in enhancing your illustration design? Please indicate (-) if you have no suggestions	Some respondents suggested using AI as the main tool for hard sketching to assist illustrators in generating additional ideas while creating illustrations. The majority of respondents agreed that AI helps visualize ideas and imagination in a visual form, making it more engaging and inspirational. A few respondents believed that AI aids in obtaining new ideas that can be creatively incorporated into designs.

Based on the survey results from 22 respondents, the majority—21 participants—reported having used AI to generate digital images or illustrations. The most commonly used AI tools included Leonardo.ai, MidJourney, and ChatGPT. The primary challenges in illustration design involved the initial sketching phase, adjusting character expressions, and color rendering. Most respondents agreed that AI can accelerate the illustration design process, although some noted that it slightly diminishes aspects of manual creativity. However, AI was also seen as a tool that aids in exploring visual styles and provides new ideas in the creative process. Overall, the AI collage method in illustration design was considered to enhance productivity and facilitate a broader exploration of visual concepts.

5. CONCLUSION

Artificial Intelligence (AI) plays a crucial role in supporting visual creativity in illustration design, particularly through AI-based collage techniques. AI-based collage techniques have proven to be an effective method in enhancing visual creativity. This study demonstrates that the collaboration between AI and human creativity can accelerate the design process. The survey results from 22 respondents revealed that the majority of AI users felt that it helped in exploring visual styles and accelerating the illustration design process. However, while AI provides efficiency in the creation of artwork, challenges such as initial sketches, coloring, and character expression adjustments still require manual skills. Therefore, AI is not a replacement for human creativity but rather a tool that can be used wisely to enhance productivity and broaden the possibilities for visual exploration in illustration design.
Recommendations:

- AI as a Support Tool: Use AI for idea exploration and production efficiency without eliminating manual creativity.
- Collage Technique Development: Continue research to adapt AI with traditional methods to create more unique artworks.
- Ethics and Copyright Studies: A deeper understanding of regulations and ethics in the use of AI for visual arts is necessary.

Balance between AI & Creativity: Designers must maintain a balance to ensure that their works retain originality and artistic value. With this recommendation, it is hoped that the collaboration between AI and human creativity will continue to develop, benefiting the field of illustration design and opening new opportunities in the creative industry.

6. ACKNOWLEDGEMENT

The authors would like to express their deepest gratitude to Universitas Primakara, particularly the Department of Visual Communication Design and the Faculty of Economics and Business, for providing the academic environment and support that made this research possible. Special thanks are extended to the students of the Visual Communication Design program who participated in the questionnaire, offering invaluable insights that enriched the findings of this study. The authors are also grateful for the inspiration and technological advancements provided by AI tools such as Copilot, which were instrumental in developing the collage-based illustration techniques discussed in this paper. Finally, the authors acknowledge the contributions of previous researchers whose works served as the theoretical foundation and provided critical perspectives on the integration of artificial intelligence in the creative industry.

7. REFERENCES

Alfian, T. (2023). *Sejarah Desain Grafis Barat*. UNISNU PRESS.

Amalia, R. N., & Dianingati, R. S. (2022). Pengaruh jumlah responden terhadap hasil uji validitas dan reliabilitas kuesioner pengetahuan dan perilaku swamedikasi. *Generics: Journal of Research in Pharmacy*, *2*(1), 9-15. https://doi.org/10.14710/genres.v2i1.12271.

Andhita, P. R. (2021). *Komunikasi visual* (Vol. 1). Zahira Media Publisher.

Aulianshah, K. A. (2023). Tinjauan dan Respons Kreatif terhadap Penggunaan AI dalam Ilustrasi Media Promosi dan Dampak yang Ditimbulkannya. In *Seminar Nasional Institut Kesenian Jakarta (IKJ)* (Vol. 2, pp. 395-411). https://doi.org/10.52969/seminarikj.v2i.83.

Budi, H., Sasany, N., & Fu'adin, A. (2024). Analisis dampak penggunaan artificial intelligence (AI) dalam kampanye politik terhadap art illustrator. *Kohesi: Jurnal Multidisiplin Saintek*, 3(4), 1311-3025.

Herlijanto, A. A. (2024). Dinamika Perubahan Industri Kreatif di Era Artificial Intelligence. *Prosiding Semnaskom-Unram*, *6*(1), 218-225.

Hibatulwafi, F., & Laksmi, L. (2024). Fenomena Penggunaan Generative AI dalam Perilaku Pencarian Informasi Praktisi Teknologi. *Media Pustakawan*, *31*(2), 141-155.

Ifadhila, I., Rukmana, A. Y., Erwin, E., Ratnaningrum, L. P. R. A., Aprilia, M., Setiawan, R., ... & Setiawan, H. (2024). *Pemasaran Digital di Era Society 5.0: Transformasi Bisnis di Dunia Digital*. PT. Sonpedia Publishing Indonesia.

Malau, M., Sihite, I. F., Sumanti, I. H., Desrianty, R. M., & Hutahaean, Y. S. R. (2024). Perkembangan Artificial Intelligence dan Tantangan Generasi Muda di Era Super Digitalized. *Ikra-Ith Abdimas*, *8*(1), 251-257.

Prihartanto, T. H., & Halimawan, J. I. (2024). Pixai: Aplikasi Berbasis Generative Ai Sebagai Alat Untuk Desain Karakter Yang Efisien. *Jurnal Seni dan Reka Rancang: Jurnal Ilmiah Magister Desain*, *7*(3), 463-472.

Priyono, D., Putra, I. N. A. S., Sutarwiyasa, I. K., Rizaq, M. C., Setiawan, I. N. A. F., & Jayanegara, I. N. (2023). *Desain Komunikasi Visudal Dalam Era Teknologi: Peran Teknologi Terhadap Perkembangan DKV*. PT. Sonpedia Publishing Indonesia.

Rachmad, Y. E., Wardani, K. K., Andhini, G. K., & Basiroen, V. J. (2024). *Buku Ajar Manajemen Desain Komunikasi Visual (DKV)*. PT. Sonpedia Publishing Indonesia.

Rachmawati, I., Rosyid, D. F., Parman, S., Solihah, Y. A., & Putra, G. M. (2024). Penerapan Artificial Intelligence pada Media Desain Grafis Menggunakan Analisis Interpretasi Edmund Feldman. *Jurnal Digit: Digital of Information Technology*, *14*(1), 66-78. https://doi.org/10.51920/jd.v14i1.372.

Rahmahafida, N. I., & Sinaga, W. B. (2022). Analisis Problematika Lukisan Ciptaan Artificial Intelligence Menurut Undang-Undang Hak Cipta. *Jurnal Pendidikan Dan Konseling (JPDK)*, *4*(6), 9688-9696.

Ridayanti, I., & Meidawaty, S. (2020). Upaya meningkatkan kreativitas anak usia dini melalui kegiatan kolase. *Tarbiyat al-Aulad: Jurnal Pendidikan Islam Anak Usia Dini*, *4*(2), 27-44.

Sa'Adah, V. N., Satrio, V., Andreano, M. E., Siahaan, C., & Faradiba, F. (2024). Pengaruh Perkembangan AI Berbasis Desain Terhadap Kreatifitas Siswa SMK PB Soedirman 1 Jakarta, Jurusan Desain Komunikasi Visual. *Phi_TERA: Journal of Physics in Teaching, Education Research and Application*, *1*(1), 21-28.