Negotiating Creative Autonomy: Design Students' Resistance To Ai-Driven Automation In Digital Visual Culture

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Abstract

The widespread adoption of Artificial Intelligence (AI) in creative fields has created ambivalent dynamics for emerging designers. While some embrace AI as an assistive tool in design production, others reject it, raising ethical, emotional, and professional concerns. This study investigates how resistance to AI is expressed by design students who are in the process of developing their creative identities. Using a qualitative approach through in-depth interviews, this research explores the motivations, experiences, and values of students who intentionally avoid AI in their creative practice. The findings reveal that these students perceive AI-generated works as emotionally detached, overly instant, and lacking the uniqueness of human expression. Their resistance is grounded in aesthetic values, the integrity of the creative process, and anxieties surrounding the shifting role of designers within the contemporary visual culture. Interestingly, despite their critique, participants recognize the educational importance of learning about AI provided it is framed critically and balanced with manual exploration and emotional depth. This research contributes to a deeper understanding of how young creatives negotiate authenticity and agency in a rapidly automated cultural environment, and suggests pedagogical approaches that respect both technological literacy and reflective creative practice.

Keywords: Artificial Intelligence, creative resistance, design education, digital culture, authenticity

INTRODUCTION

In recent years, artificial intelligence (AI) has emerged as one of the most disruptive technologies across various fields. A Katadata Insight Center report revealed that 38.6% of Indonesians are familiar with and have used AI tools such as ChatGPT, DeepSeek, and Gemini (Maulana, 2025). In line with this report, a KIC survey also revealed that 64.7% of Indonesians have used AI in their daily lives. They consider the presence of AI to have a positive impact on aspects of efficiency and effectiveness in daily productivity (61.1%), innovation in the creative industry (26.9%), and problem-solving (25.7%) (Katadata Insight Center, 2025). In the world of design, AI is also considered to enable creative practices to be accessible and can be done by anyone. Furthermore, in the KIC survey, 44.8% of people use AI for photo or video editing. AI tools such as ChatGPT, Midjourney, DALL·E, Canva AI, and others have enabled the creative and visualization process to be faster and more efficient. As many as 70% of respondents in the Kantar Research Firm reported using AI for creative needs such as design and content editing (kumparanTech, 2025). Not only is it used by the general public, but graphic designers are also

beginning to open up to the presence of AI. After adopting AI, 56% of graphic designers reported increased efficiency, and 78% of users believe AI improves their creative productivity (Gitnux, 2025).

At the same time, the presence of AI also raises risks and critical questions about the transfer of human work to machines, creative authority, originality, and the artistic value of the resulting work. These issues become even more complex when they touch the educational realm, particularly for design students who are developing their professional identity and competency as future designers. In a previous study on the use of AI in design students' creative practices, 53.4% of respondents answered that they had never used generative AI for such purposes, while only 46.2% had (Utami et al., 2025). In this context, an interesting phenomenon has emerged where some students choose not to use AI in their creative practices. This choice is often not based on ignorance or limited access, but rather on a conscious decision to maintain manual processes as a form of authentic expression. This resistance challenges the dominant narrative of technological progress as neutral and always positive.

Literature on AI in design generally focuses on innovation and efficiency, such as accelerating the design process, personalizing products, and expanding creative possibilities through generative algorithms (Adeleye, 2024; Agboola, 2024; Verganti et al., 2020). AI is also portrayed as a tool for expanding designers' creativity and democratizing access to advanced design tools (Di Dio et al., 2024), although discussions about originality and personal expression in the context of AI-based design remain critical issues (Günay, 2025). However, little attention has been paid to the forms of resistance emerging from students. Yet, the choice not to use AI is also a form of articulation of values and identity, which can be read as a critique of the hegemony of technology in the creative process.

This research aims to explore how design students interpret the choice not to use AI. By exploring their experiences and perspectives, this article aims to highlight resistance as a form of creative agency that has social, ethical, and cultural content in the context of an increasingly digitalized design ecosystem.

Artificial intelligence has transformed the work paradigm in the design industry. Generative AI enables instant concept visualization, promising high efficiency in the visual production process. This technology is driving a shift from manual methods to automation-based approaches that maintain creative flexibility (P. Lu et al., 2024). In practice, generative AI can reduce production time, reduce designers' cognitive load, and simplify the process of exploring visual ideas (Sira, 2023). Furthermore, AI has expanded access to high-quality visual content production, while challenging conventional definitions of creative skills and work (Caramiaux et al., 2025). In the technology sector and other creative industries, generative AI has been shown to improve operational efficiency by automating design creation and documentation, which previously required lengthy manual processes (Khokhlov, 2025). Furthermore, the synergy between generative AI and content production opens up new possibilities for creating consistent, rapid, and scalable visual materials across various digital media platforms (Yang, 2024). However, this transformation has also sparked debate about the role of humans in the creative process. In the educational context, these changes force students to adapt quickly without always having sufficient space to reflect on their impact.

Several studies have shown that the use of AI can accelerate workflows and facilitate visual exploration. Generative AI allows designers to quickly generate concept variations, expanding the scope for idea exploration and reducing the

technical workload in the design process (Saadi et al., 2024). However, this speed and automation also raise concerns about the originality of the work. Several studies have shown that AI often produces a homogenous or uniform aesthetic, thus obscuring the unique character of each designer (Christiansen et al., 2024; Wu & Li, 2024). Furthermore, concerns have been raised that the use of AI in the context of aesthetic education may erode students' individual expression, as they tend to rely on machine-generated visual output (M. Lu & Wang, 2024). Furthermore, the phenomenon of "design fixation" in AI has also been identified, where AI systems tend to produce repetitive and less diverse solutions, limiting the possibility of truly novel design exploration (L. Chen et al., 2025). Thus, while AI brings technical advances, it is important to continue to critically examine its impact on creative expression and aesthetic diversity in design.

A number of studies have also begun to address the issue of ethics and human agency in creative collaborations with AI, demonstrating that the use of AI is not always accepted within the design community. For example, Chen (2024) highlights ethical challenges and artists' perceptions of the role of AI in artistic collaborations as part of speculative design. Najafi (2024) also suggests that AI can be a methodological partner in practice-based research, but still requires critical reflection from creative actors on its use. Furthermore, a study by Chandrasekera et al. (2025) revealed that while AI can improve design outcomes and reduce cognitive load, a preference for manual approaches remains as part of expressive strategies. Research by Liu et al. (2024) even shows that AI errors can stimulate human creativity, but still require active interpretation from designers, demonstrating the importance of human agency in design practice. In the context of non-linear human-AI collaboration, Zhou et al. (2024) found a shift in perception of AI, from a mere tool to a partner in sharing opinions, while still leaving room for designers to negotiate creative control.

The theory of technological resistance explains that resistance to technology is not simply a form of backwardness, but often a conscious choice based on values, beliefs, or identity. Recent studies have shown that resistance to technology is often driven by value barriers and traditions, not just technical factors or ignorance. In professional contexts such as law and media, individuals reject generative AI because they perceive it as threatening long-established work values and creating dependency on uniform and opaque systems (C.-C. Chen et al., 2022; Nasir & Matt, 2025). Furthermore, digital resistance can also be read as a critical and reflective act against technological hegemony, not simply a form of passive rejection. It is a political and ethical articulation that reflects an individual or group's efforts to reshape their relationship with technology based on their values (Couture et al., 2023). In this context, design student resistance can be understood as an effort to maintain creative control.

A. RESEARCH METHOD

This research employed a descriptive qualitative approach. This approach was chosen to explore in-depth the meanings students attach to their decision to reject the use of AI in design practice. Data were collected through semi-structured

interviews with three design student informants. Informants were purposively selected based on their consistent experience of not using AI.

Interviews were conducted offline for 30 to 60 minutes and recorded with the informants' consent. Each interview was then transcribed and analyzed thematically to identify patterns of resistance and the underlying values.

The researchers maintained research ethics by concealing the identities of informants and granting them the right to opt out of certain questions. Data validity was strengthened by triangulating informants' narratives with observations of the digital design context in general.

Analysis was conducted using an open coding approach to identify key themes emerging from the interview data. These themes were then linked to theories of resistance and student creative culture in the context of digital media.

B. RESULTS AND DISCUSSION

To understand how design students respond to the presence of AI technology in their creative practices, in-depth interviews were conducted with three informants from relatively similar backgrounds but with diverse perspectives. These interviews aimed to explore their perceptions, experiences, and attitudes toward the use of AI in design, including how they define creativity, originality of work, and the challenges and hopes for the future of design education. Their responses reflect a negotiated position between adaptation to technological advances and resistance to the instantaneousness of the creative process. The following is a narrative of the findings from each informant.

Informant 1 demonstrated a much more critical attitude toward the use of AI in design. He explained that his creative process involves searching for references on Pinterest, digital sketches in Illustrator, color exploration on Color Hunt, and discussions with friends. For him, this lengthy process is part of the aesthetic and personal values of his design work. He considered the use of AI too instant and inconsistent with his values as a designer. He even used the word "betrayed" to describe his feelings about the instantaneous work produced by AI. He believes that design must go through stages of research, communication with clients, and a tiring, yet thoughtful, process of revision and exploration. AI-generated results may appear visually original, but they lack a deep creative

thought process. This led him to reject AI as a design tool, and he has never tried using it.

However, he doesn't feel socially pressured by his decision. Neither his friends nor his lecturers have a problem with it, and he doesn't experience FOMO. In fact, the prevalence of AI has actually made him lose interest. Informant 1 remains open to learning about AI in education, as long as it's combined with a deep approach to psychology, aesthetics, and understanding human emotions in design.

Informant 2 also expressed a critical attitude towards the use of AI. He learned about ChatGPT and several other AI tools from social media, especially those currently trending on Facebook. However, he has never used them to create works such as caricatures or illustrations. He believes AI lacks "artistic" appeal and the results lack deep visual appeal. AI is only suitable for use outside of fine art, and its use in design should respect the role and work of human artists. He stated that AI may produce original work, but it isn't creative. This is because the process is instantaneous and doesn't involve exploration that reflects the creator's identity. He also highlighted the controversial social media phenomenon of using AI to imitate the Ghibli style. He believes this demonstrates how AI blurs the line between human and machine creation, which is troubling.

Despite his critical stance, Informant 2 agreed with the inclusion of AI in design education curricula. He believes it's important for designers to stay current to avoid being left behind by technology. However, he emphasized that this adaptation must be accompanied by a commitment to the values of originality and reflection in design. Creativity, for him, is about thinking outside the box and producing unique work that AI struggles to achieve.

Informant 3 was the most skeptical and had little interest in AI. He learned about ChatGPT and DeepSeek from Google and friends, but had never used them in the design process. He found AI to produce monotonous visuals and poorly reflected the designer's personal tastes. He didn't believe AI could represent vision or emotion in design because it was too flat and procedural. He also didn't know how to create prompts and didn't feel the need to learn. He considered AI too instantaneous and disrespectful of the design thinking process. Like other informants, he distinguishes between original and creative work, and for him, AI is

only capable of providing originality without true creativity. This is the main reason he rejects the use of AI, both in personal design and in the exploration of college assignments.

Although not interested in AI, he still supports education that introduces this technology as a form of prevention. Design education, he believes, should equip students with the skills to face technological developments so they can remain sustainable. He concluded the interview by emphasizing that designers must constantly update and maintain the quality of their creativity to avoid being overtaken by machines.

C. DISCUSSION

1. Awareness and Exposure to AI

All informants had varying levels of awareness of AI. Informant 2 learned about various AI tools such as ChatGPT, DeepSeek, and Leonardo through social media (especially TikTok and FYP). Informants 1 and 3 were more familiar with AI through personal exploration, such as Google searches or referrals from friends. Informant 2 had seen or used AI to a limited extent to generate ideas, while informants 1 and 3 had never used AI in the production of visual works. This demonstrates how digital media shapes students' technological awareness, but does not always encourage full adoption. It also represents an initial form of resistance to AI's penetration into creative practice.

2. Perceptions of AI in Design

All informants believed that AI cannot yet replace the human touch. AI was considered monotonous (Informant 3), less natural (Informant 1), and less artistic (Informant 2). They believed AI could not yet fully represent human visual taste. Negative perceptions of AI can be read as a form of symbolic resistance to the commodification of creativity. Students defend aesthetic values and authenticity as a form of creative culture critical of automation.

3. Reasons for Rejecting or Being Skeptical of AI

All informants rejected AI for reasons of values, principles, and aesthetics. They considered AI too instant, lacking a research process, and ignoring the

struggles of manual design. Informant 1 felt "betrayed," Informant 2 said AI diminished uniqueness, and Informant 3 saw no urgency because they didn't understand the prompting process. AI results were considered original but not creative. This resistance was ideological, as they rejected the logic of technological efficiency that eliminates the contemplative process in art. This served as a form of affirmation of the students' creative identity, rejecting being replaced by machines.

4. Reflection on Creativity and Authenticity

All informants agreed that creativity is born from a personal, unique, and thoughtful process. AI is seen as obscuring this element. Informants 1 and 3 emphasized the importance of classical processes and authenticity born from emotion and thought. Informant 2 highlighted the controversy surrounding the use of the Ghibli style as an example of the loss of uniqueness when AI is involved. The emphasis on authenticity and the creative process reflects a creative culture resistant to digital disruption. This also serves as a critique of the fast-paced and instantaneous visual culture of the attention economy.

5. Social and Academic Reactions

In general, the social environment (peers and lecturers) did not exert significant pressure on the informants to use AI. Informants 2 and 3 expressed disinterest because AI had become a mainstream trend, thus losing its appeal. Informant 1 felt that his manual decisions were not a problem in the social environment. The absence of social pressure demonstrates the flexibility of the campus creative culture, but also creates space for the emergence of micro-resistance, namely the rejection of the normalization of AI as the new standard.

6. Hopes for Education and the Future

Although critical of AI, all informants agreed that design education should incorporate an understanding of AI. Informant 2 saw the importance of an AI curriculum to prepare students for industry. Informant 1 hoped that education would also emphasize designers' understanding of the psychological and emotional aspects of design, which AI work currently lacks. Informant 3 considered an understanding of AI important as a form of prevention so that designers would not

be overwhelmed by technology. The expectation that AI will be taught in the curriculum shows that student resistance is not a form of total rejection, but rather an adaptive strategy that maintains the principles of a reflective and humanistic creative culture.

CONCLUSION AND SUGGESTIONS

All informants displayed a spectrum of critical views toward AI. They also demonstrated resistance to the use of AI in the creative process. Informants tended to view AI as producing instant, monotonous work that poorly reflected the designer's character and personal emotions. Although this technology is recognized for its ability to facilitate visual exploration, they rejected its use in the production of final works because they perceived it as diminishing the value of authenticity, creative reflection, and the integrity of the design process itself. This resistance was not a total rejection of technology, but rather a form of negotiation for their creative autonomy in an increasingly fast-paced and instantaneous digital visual culture. Creativity is still understood as a process involving emotion, research, and human involvement that cannot yet be fully replaced by AI.

Design education is considered a crucial key in bridging the adaptation to these technological developments. They supported the integration of AI learning into the curriculum, provided it still prioritized aspects of the creative process, personal reflection, and humanistic values. In this context, student resistance can also be understood as a form of creative culture that rejects the dominance of efficiency and instant logic in the production of digital visual works. Students demonstrated a form of negotiation of identity and position toward AI, between openness to technological innovation and rejection of instant logic that threatens the creative, ethical, and emotional values of the design process itself.

The limitations of this study lie in the limited number of informants, which does not represent a broader range of institutional backgrounds, genders, or levels of design experience. Furthermore, this research focused on perceptions, rather than actual practice or direct observation of the work produced. Future research requires broader demographics and multimodal or visual approaches to analyze how AI actually impacts students' design processes and outcomes.

DAFTAR PUSTAKA

Adeleye, I. O. (2024). The Impact of Artificial Intelligence on Design: Enhancing Creativity and Efficiency. *Journal of Engineering and Applied Sciences*, *3*(1), 1–14. https://doi.org/10.70560/vvsfej12

Agboola, O. P. (2024). The Role of Artificial Intelligence in Enhancing Design Innovation and Sustainability. *Smart Design Policies*, *1*(1), 6–14. https://doi.org/10.38027/smart-v1n1-2

Caramiaux, B., Crawford, K., Liao, Q. V., Ramos, G., & Williams, J. (2025). *Generative AI and Creative Work: Narratives, Values, and Impacts* (No. arXiv:2502.03940). arXiv. https://doi.org/10.48550/arXiv.2502.03940

Chandrasekera, T., Hosseini, Z., & Perera, U. (2025). Can artificial intelligence support creativity in early design processes? *International Journal of Architectural Computing*, *23*(1), 122–136. https://doi.org/10.1177/14780771241254637

Chen, C.-C., Chang, C.-H., & Hsiao, K.-L. (2022). Exploring the factors of using mobile ticketing applications: Perspectives from innovation resistance theory. *Journal of Retailing and Consumer Services*, *67*, 102974. https://doi.org/10.1016/j.jretconser.2022.102974

Chen, J. (2024). The Role of AI: Speculative Design in Redefining Artistic Collaboration. *Journal of Ecohumanism*, *3*(8). https://doi.org/10.62754/joe.v3i8.4899

Chen, L., Song, Y., Zheng, C., Jing, Q., Hansen, P., & Sun, L. (2025). *Understanding Design Fixation in Generative AI* (No. arXiv:2502.05870). arXiv. https://doi.org/10.48550/arXiv.2502.05870

Christiansen, M. B., Rafsanjani, A., & Jørgensen, J. (2024). Nature redux: Interrogating biomorphism and soft robot aesthetics through *Generative* AI. *Frontiers in Robotics and AI*, *11*, 1472051. https://doi.org/10.3389/frobt.2024.1472051

Couture, S., Toupin, S., & Latzko-Toth, G. (2023). PUSHING BACK: DIGITAL RESISTANCE AS A SENSITIZING CONCEPT. *AoIR Selected Papers of Internet Research*. https://doi.org/10.5210/spir.v2023i0.13409

Di Dio, S., Inzerillo, B., Monterosso, F., Morvillo, S., & Russo, D. (2024). *Artificial Intelligence and Design: Innovation, Practical Applications, and Future Creative Horizons*. 2024 AHFE International Conference on Human Factors in Design, Engineering, and Computing (AHFE 2024 Hawaii Edition). https://doi.org/10.54941/ahfe1005566

Gitnux. (2025). *Ai In The Design Industry Statistics Statistics: Market Data Report 2025*. https://gitnux.org/ai-in-the-design-industry-statistics/?utm_source=chatgpt.com

Günay, M. (2025). Artificial Intelligence and Originality in Design. *ART/Icle: Sanat ve Tasarım Dergisi*, *4*(3), 449–469. https://doi.org/10.56590/stdarticle.1548924

Katadata Insight Center. (2025). *Kedaulatan AI untuk Memberdayakan Indonesia Perkembangan dan Pemanfaatan Teknologi AI di Masyarakat Indonesia*.

Khokhlov, Y. (2025). Advancing operational efficiency in software companies through *Generative* AI. *The American Journal of Engineering and Technology*, *07*(01), 11–18. https://doi.org/10.37547/tajet/Volume07Issue01-03

kumparanTech. (2025, February 7). *59% Pengguna HP di RI Sudah Adopsi AI, Dipakai buat Cari Info—Edit Konten*. kumparan. https://kumparan.com/kumparantech/59-pengguna-hp-di-ri-sudah-adopsi-ai-dipakai-buat-cari-info-edit-konten-24RwDrD7oAc

Liu, F., Lv, J., Cui, S., Luan, Z., Wu, K., & Zhou, T. (2024). Smart “Error”! Exploring Imperfect AI to Support Creative Ideation. *Proceedings of the ACM on Human-Computer Interaction*, *8*(CSCW1), 1–28. https://doi.org/10.1145/3637398

Lu, M., & Wang, H. (2024). The practice and reflection of *Generative* AI in the cultivation of aesthetic education in colleges and universities: Centred on environmental design major. *MATEC Web of Conferences*, *395*, 01021. https://doi.org/10.1051/matecconf/202439501021

Lu, P., Hsiao, S.-W., Tang, J., & Wu, F. (2024). A *Generative*-AI-based design methodology for car frontal forms design. *Advanced Engineering Informatics*, *62*, 102835. https://doi.org/10.1016/j.aei.2024.102835

Maulana, A. D. W., Luky. (2025, February 8). *Survei KIC: 83,6 Persen Masyarakat Indonesia Familiar Dengan AI - Teknologi Katadata.co.id*. https://katadata.co.id/digital/teknologi/67a70c3d7662e/survei-kic-83-6-persen-masyarakat-indonesia-familiar-dengan-ai

Najafi, H. (2024, October 12). AI as praxis: Artificial intelligence as a method in practice-led research for art and design PhD students. (M. Mortensen Steagall, Trans.). *LINK 2024 Conference Proceedings*. LINK 2024 Conference Proceedings. https://doi.org/10.24135/link2024.v5i1.231

Nasir, M. A. B., & Matt, C. (2025). *Can Generative AI even Climb the High Mountains? An Identification of Resistance Factors and Forms among Legal Practitioners*. Hawaii International Conference on System Sciences. https://doi.org/10.24251/HICSS.2025.539

Saadi, J. I., Chong, L., & Yang, M. C. (2024). The effect of targeting both quantitative and qualitative objectives in *Generative* design tools on the design outcomes. *Research in Engineering Design*, *35*(4), 409–425. https://doi.org/10.1007/s00163-024-00440-y

Saroj, S. K. (2025). Socio-Culture Impact of AI on Traditional Indian Communities. *The Voice of Creative Research*, *7*(1), 78–84. https://doi.org/10.53032/tvcr/2025.v7n1.09

Sira, M. (2023). *Generative* AI Takes Centre Stage: Revolutionizing Productivity and Reshaping Industries. *System Safety: Human - Technical Facility - Environment*, *5*(1), 57–65. https://doi.org/10.2478/czoto-2023-0007

Utami, A. D. W., Trias Widha Andari, Amalia Hartiningrum, Ragil Noviyanti, Sonhaji Arif, Putra Uji Deva Satrio, & Akhya' Muhammad Khaidzir. (2025). *Prompt Culture and Visual Creativity in AI-Assisted Design: Perspectives from University Students*.

Verganti, R., Vendraminelli, L., & Iansiti, M. (2020). Innovation and Design in the Age of Artificial Intelligence. *Journal of Product Innovation Management*, *37*(3), 212–227. https://doi.org/10.1111/jpim.12523

Wu, X., & Li, L. (2024). An application of *Generative* AI for knitted textile design in fashion. *The Design Journal*, *27*(2), 270–290. https://doi.org/10.1080/14606925.2024.2303236

Yang, Y. (2024). An In-Depth Exploration of the Synergy Between *Generative* AI and Content Production. *Artificial Intelligence Technology Research*, *2*(2). https://doi.org/10.18686/aitr.v2i2.4015

Zhou, J., Li, R., Tang, J., Tang, T., Li, H., Cui, W., & Wu, Y. (2024). Understanding Nonlinear Collaboration between Human and AI Agents: A Co-design Framework for Creative Design. *Proceedings of the CHI Conference on Human Factors in Computing Systems*, 1–16. https://doi.org/10.1145/3613904.3642812