

Therefore, artificial intelligence is a powerful driver of digital transformation, influencing engineering, economic systems, and society as a whole. While it creates significant opportunities for innovation and growth, it also requires careful consideration of ethical, social, and economic implications. Further research is needed to ensure that AI technologies are developed and implemented responsibly.

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Anastasiia Zakharchuk

*Kyiv National University of Technologies and Design
(Kyiv, Ukraine)*

Nataliia Liubymova

*Kyiv National University of Technologies and Design
(Kyiv, Ukraine)*

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON MODERN GRAPHIC DESIGN

Artificial intelligence in graphic design should be seen primarily as a tool that supports the creative process rather than replaces it. Today AI technologies such as ChatGPT, DALL·E, and Adobe Firefly can generate visual compositions, suggest stylistic directions and assist at the ideation stage. This can significantly speed up the designer's workflow and provide a wide range of options that can later be refined and developed further (Kolisnyk, 2025). At the same time, the effectiveness of these tools largely depends on the user. It is the designer who formulates the prompt, evaluates the

results, and adapts them to a specific task or project. Because of this AI does not function independently but works as part of a human-centered process. Therefore while artificial intelligence expands technical possibilities it still remains a supportive element rather than a replacement for human creativity (Clarencia et al., 2024).

Despite its broad capabilities artificial intelligence has significant limitations that prevent it from being considered a full creative subject. AI systems do not possess consciousness, personal experience or emotional perception which are important components of the creative process. Since AI relies on existing data its results are often combinations of already existing visual solutions rather than a manifestation of the original author's vision (Zahreddine & Srouji, 2025).

To better understand this issue, a small experiment was conducted. Artificial intelligence was asked to create a poster on the topic of the environmental crisis and the result was then compared with works created by designers. A small group of respondents was surveyed, which made it possible to draw several conclusions.

The AI-generated poster was perceived as logical, clear, and easy to understand (Fig. C);. It also included additional textual elements that could encourage the viewer to take certain actions aimed at improving the environmental situation.

However, the poster created by a human designer evoked a different response. In addition, human-designed works often rely on emotionally sensitive elements, such as images of vulnerable animals or the visible consequences of the environmental crisis (Fig. 1, A; B). This approach creates a stronger emotional reaction, helps the viewer quickly understand the seriousness of the problem, and leaves a more lasting impression.

Such visual strategies appeal not only to logic but also to empathy, making the message more personal and engaging for the audience. As a result, the viewer is more likely to reflect on the issue and remember it over time, rather than simply understanding the information on a superficial level.

These findings, based on the experiment, show that while artificial intelligence is capable of creating posters, it is still less effective compared to human designers for a number of reasons, particularly in terms of emotional impact and originality.



ABC

Fig. 1. Examples of posters used for comparison in the study: a – “Clean. Save Ocean”, Ogilvy & Mather Bucharest for WWF, 2010; b – “Unplastic India”, VML

The results of the analysis show that artificial intelligence has already become an important part of modern graphic design. However, it should be viewed primarily as a tool rather than an independent creator. Its use opens up new possibilities and simplifies certain stages of the design process, but it cannot fully replace human creativity.

The study also demonstrates that, despite the technical accuracy and clarity of AI-generated images, they often lack emotional depth and individual character. In contrast, works created by human designers are more likely to attract attention, evoke associations, and establish a deeper connection with the viewer.

Overall, artificial intelligence does not replace creativity but rather changes the way it is approached and implemented. Despite the rapid development of technology,

the human designer remains the key figure in creating meaningful and expressive visual communication.

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Mariia Zvierieva

*Kyiv National University of Technologies and Design
(Kyiv, Ukraine)*

Nataliia Gudkova

*Kyiv National University of Technoloiesy and Design
(Kyiv, Ukraine)*

AI-DRIVEN OPTIMIZATION OF SUPPLY CHAIN PROCESSES AND ORDER DELIVERY PERFORMANCE

The rise of artificial intelligence (AI) altogether affects work commercialization. The improvement of AI over the most recent years has enabled systems and technologies to take on tasks in the labor force that were previously performed exclusively by humans. The development of AI has transformed many industries, including production, healthcare, transportation, finance, and increasingly logistics and supply chain management.

The implementation of artificial intelligence has led to significant changes in various sectors of the economy. It has created new opportunities for automation and efficiency improvements, while at the same time it has also contributed to disruptions in labor markets. Algorithms and intelligent systems are increasingly replacing human involvement in routine and analytical tasks, and this tendency is expected to grow further in the future (Zvierieva & Kugai, 2024, 120-122).