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Using Generative AI in Creative Process: Non-Art Student Experiences and Perspectives

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Abstract

Generative Artificial Intelligence (GenAI) is becoming more prevalent in media production, aiding tasks from screenplay writing to postproduction. GenAI tools like Dall-E and Midjourney may be able to help students brainstorm and visualize their story ideas more effectively and efficiently. This article explores how GenAI allows non-art major students to employ and apply the technology for creative brainstorming and storyboarding. It also delves into students' views on the benefits and challenges of using GenAI in the creative process.

Introduction

"I can't draw. I am not good at it."

"I am not an artist."

These are common responses from media production students when tasked with sketching thumbnails and creating storyboards for video projects. The varying levels of drawing skills and experiences among non-art major students pose challenges in sketching story ideas and outlines during the media production process.

Generative Artificial Intelligence (GenAI) technologies like ChatGPT are already transforming long-established concepts and practices of teaching and learning in higher education, from writing assistance and learning assessment to synthesizing data and developing solutions (Atlas, 2023; Berg, 2023; Crompton & Burke, 2023). Likewise, text-to-image GenAI tools like Dall-E and Midjourney that translate conversational text prompts into high-quality images may play a significant role in reshaping the traditional media production process, from easing students' drawing anxieties about storyboarding to automating various editing tasks and visual effects during postproduction. Moreover, GenAI's capacity to learn from user inputs and generate customized and individualized images can support students in brainstorming and furthering creative thinking.

The goal of developing the assignment detailed in this article was to a) explore practical ways to address the wide-ranging differences in basic drawing skills among media production students, b) understand the perceptions and experiences of using GenAI in the creative process among non-art major students, and c) generate creative and new ideas for integrating GenAI in the media industry and education.

Assignment

Storyboarding, sequencing of drawings that visualize the shots planned for screen-based media such as movie and television, is integral to media production,

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translating script ideas into visual outlines that clarify story presentation and facilitate clear communication among team members throughout the production process.

In the assignment, twenty-two students were tasked with creating a music video to express their creativity and showcase technical skills in video editing and visual effects. For storyboarding, they had the following two options: traditional sketching using pencil and paper and conversational prompting using AI image generator. Prior to creating a storyboard, students practiced writing effective text prompts for GenAI using Adobe Firefly, an image generator trained on licensed content and public domain content where copyright has expired. Upon completing the assignment, students were instructed to submit the final video along with the storyboard, and the final video was evaluated for production quality as well as for how well the storyboard was followed.

Students also completed a reflection survey after finishing the assignment. The survey was intended to gather their views on using GenAI in the creative process and included the following questions:

- Do you think AI image generators are helpful in creative brainstorming / storyboarding?
- Do you think using AI image generators could lead to a loss of originality in ideas?
- What do you perceive as the main benefits / concerns of using AI image generators, specifically in the creative process?

The survey revealed generally positive views on using GenAI in the creative process among students (11 out of 22) as they found the technology useful in visualizing and detailing ideas, stimulating creativity, and saving time:

- I think it can be helpful if you are not particularly artistic (e.g., drawing). When storyboarding, it can help you convey your ideas better to other people about what you want your shots to look like.
- I think AI image generators can present a new angle to creative ideas that producers themselves never thought of. AI image generators will only serve to enhance creative process.
- For those who are not artistically skilled, or if you are low on time, it is a fast, simple, and relatively realistic generator, with options for styles.

At the same time, students (10 out of 22) were concerned about the potential negative impact of using GenAI in the creative process, including hindering originality, overreliance on the technology, and inaccuracy:

- AI especially in the field of content creation trivializes the brainstorming process. It also promotes the easy way out and does not help creators practice or get better at producing ideas—a skill that could benefit them in the long run.
- I do fear it may lead people to become more dependent on AI, rather than learning skills themselves. While things may not seem problematic in the short terms, in the long run I fear that as a society we will have stopped doing creative things because AI can do it all.
- AI is sometimes hard to credit or considered untrustworthy. As many image generators are still in early stages, the programs' understanding of the prompt can sometimes be misguided or underdeveloped.

In addition, some raised further ethical concerns including plagiarism and job threats attributed to the prevalence of the technology and questioned the efficacy and effectiveness of GenAI in its ability to generate images to meet professional and artistic standards.

Conclusion

Today's film and media industry are already experimenting with GenAI in all aspects of the production operations, from developing and writing scripts (Schomer, 2024) to creating photorealistic short films and younger versions of lead actors (Heaven, 2024; Kell, 2023). Similarly, schools nationwide are exploring ways to incorporate GenAI into the classroom across disciplines (Lawrence, 2023).

Aligned with the current shift in technology integration in the industry, this assignment explored practical solutions to common difficulties that students often experience during media production. Additionally, it sought to understand students' perceptions about using GenAI in what has long been considered uniquely human—creative thinking and design. The preliminary findings suggest that students grapple with whether to integrate GenAI to streamline video production processes and save time on labor-intensive tasks, potentially compromising originality and imagination in their creative thinking. Students also found current technical limitations of GenAI—e.g., yet to generate images in precision and accuracy and to allow users to select, change, and maintain a specific style throughout the entire storyboarding process—to be a hindrance in the effective and successful integra-

tion of the technology in the creative process. However, these limitations are likely to be temporary as the image generation technology is advancing at unprecedented speed and quality (BlackForestLabs, 2024; Fortune Business Insights, 2024), with improvements already being made to allow users to recreate consistent characters across multiple images and in different scenes (Franzen, 2024).

In addition to transforming traditional methods and ways of teaching and learning in the classroom, GenAI may offer endless possibilities for reimagining and rethinking the film and media industry, including:

- Individualized and dynamic storytelling where GenAI is used to adapt and adjust storylines in real-time based on individual narrative decisions and audience reactions, creating a personalized and ever-changing story for the storyteller and the audience.
- Real-time and responsive music and sound generator where the technology can generate different genres and styles of music and sound effects, tailored to specific moods or themes in user-centered films or games and provide a unique auditory experience based on user interactions and feedback.
- Cognitive memory projector where GenAI can decode viewers' memory patterns or visualizations (Xiang, 2023) and project viewers' own memories or imagined scenarios into the film's narrative or scenes, making each viewing experience uniquely personal and deeply engaging.

In conclusion, the assignment provided a valuable learning experience and an opportunity to identify several important factors to consider when integrating this rapidly advancing and highly disruptive technology into media production education and training.

First, the integration of technology in the classroom should prioritize individual students' needs and interests. Offering options such as conversational prompting, alongside traditional sketching, for storyboarding has resulted in positive student feedback. This approach could further personalize the student learning experience by combining GenAI with traditional methods. For example, students can generate an image using prompts or provide their own drawings as input, and then use a more traditional method, such as hand drawing or digital painting over the generated images, to revise and refine their ideas according to their individual needs and interests.

Second, it is essential to assess students' existing knowledge of GenAI, including their familiarity with the technology and any preconceived notions or biases they may have, and then develop a more comprehensive instructional approach that will not only provide them with an opportunity to explore GenAI to optimize their media production efforts in the classroom but also prepare them to become more competitive and adaptable in the fast-approaching GenAI-driven workplace and daily life. Designing and adjusting assignments that allow students to explore and incorporate various GenAI tools at different stages of the media production process will help them achieve desired outcomes with maximum efficiency and become more professionally aligned with current workplace trends that seek to attract and reward employees who can integrate GenAI into daily operations and continue to adapt and evolve (Demirci et al., 2024).

Finally, it is crucial to guide students in using the technology responsibly and ethically, both in the classroom and the workplace, and to help them become aware of its potential limitations and risks. While it is important for students to know how to use GenAI to spark ideas, learn new skills, and reach their full creative potential, it is equally important, if not more so, that they understand human imagination must remain at the core and driving force of their creative endeavors. They should maintain creative control throughout the production process, adding personal, human touches to make their work truly unique and reflective of their artistic vision and individuality.

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