

Artificial Intelligence in Screenwriting: Applications and Implications

Wentao Cheng*

Guangdong Overseas Chinese High School, Guangzhou, China

**Corresponding author: Wentao Cheng.*

Abstract

This paper explores the application of artificial intelligence (AI) in scriptwriting and its implications for screenwriters and the creative process. With the development of AI tools, technology has gradually become an auxiliary partner in creative work, helping screenwriters generate ideas, organize plot structures, design characters, and enhance dialogue. The paper examines specific applications of AI in scriptwriting, including idea generation, plot testing, dialogue refinement, and collaborative creative processes, and analyzes how these tools influence the role and decision-making of screenwriters. While AI can improve efficiency and provide diverse creative options, it also raises challenges such as copyright and authorship issues, the risk of repetitive or stylistically similar outputs, and potential impacts on writers' skills and career development. This study also highlights the theoretical and practical implications of AI-assisted scriptwriting, showing how human-computer collaboration can reshape creative work and offering references for future research and practice. Overall, this paper provides a comprehensive overview of AI's role in scriptwriting and guidance for both academic study and creative practice.

Keywords

artificial intelligence (AI), screenwriting, creative process, ownership, cultural adaptation

1. Introduction

In recent years, artificial intelligence has gradually entered the creative field, and script creation has also begun to be influenced by it. AI tools can help screenwriters quickly generate ideas, improve plot structure and character design, and optimize dialogue writing, thereby increasing overall writing efficiency [1]. The emergence of these tools has changed some traditional creative methods and brought new possibilities and challenges [2]. For example, AI can provide multiple creative solutions to help screenwriters test different narrative directions in a short time. However, the final decision remains with the screenwriter [3]. In actual creative practice, the use of AI not only depends on the technology itself, but is also influenced by the creative environment, audience needs, and cultural background [4]. Although AI plays a certain role in creation, it cannot completely replace human imagination and creativity. Many scholars emphasize that scriptwriting involves not only text generation but also emotional expression, character development, and cultural understanding, all of which still require human experience and judgment [1,3]. At the same time, the

development of AI has triggered discussions on ethics and copyright, which significantly affect creators and the industry [4,5]. Therefore, understanding the role of AI in scriptwriting and its impact on creators has become an important research direction [2,6,7]. This article aims to explore the application of AI in scriptwriting, screenwriters' attitudes toward its use, and related ethical and copyright issues through literature analysis. By reviewing existing research, this study provides a balanced understanding of the advantages and limitations of AI-assisted creation and offers a reference for future research.

2. Theoretical Background

Before analyzing the impact of AI on script creation, several core concepts and theoretical foundations must be clarified in order to build a systematic understanding of human–AI collaboration in creative processes.

2.1 Script Creation

First, script creation refers to the structured process of transforming an initial narrative idea into a complete screenplay. This process typically includes conceptual development, plot structuring, character construction, scene design, and dialogue writing [3]. Unlike purely technical writing, script creation is inherently interdisciplinary, combining linguistic expression, narrative theory, emotional design, and cultural interpretation. Therefore, it is not only a textual production process but also a cognitive and artistic activity involving imagination, aesthetic judgment, and audience awareness [1,3].

2.2 Creative Process

Second, the creative process refers to the dynamic workflow through which screenwriters move from inspiration to final script completion. This process is often non-linear and iterative, involving cycles of ideation, drafting, evaluation, and revision. Human cognition plays a central role in this process, including intuition, associative thinking, emotional reasoning, and narrative judgment [3]. Even when AI tools are introduced, these cognitive dimensions remain essential because they determine how generated outputs are selected, modified, and integrated into coherent narrative structures [1,2].

2.3 Human-AI Collaboration

Another key concept is human–AI collaboration (or human–computer co-creation), which refers to the interaction mode in which human creators and AI systems jointly participate in creative tasks. In this framework, AI functions as a generative and assistive system that provides suggestions, drafts, and alternative narrative possibilities, while humans act as evaluators, editors, and final decision-makers. Research by Tang et al. shows that although AI can expand the range of creative options, it lacks autonomous narrative intent and interpretive agency; therefore, final creative authority remains with the screenwriter [3,6]. This supports the view that AI operates as an assistive partner rather than an independent creator [5].

2.4 Human Agency and Cognitive Foundations

From a theoretical standpoint, human agency theory provides a useful lens for understanding this relationship. This perspective emphasizes that humans retain control over goals, meaning-making, and decision-making in any tool-mediated creative process. In scriptwriting, this implies that narrative direction, emotional tone, and thematic coherence are ultimately shaped by human creators rather than AI systems [3,6]. Even in AI-assisted workflows, screenwriters are responsible for evaluating and integrating machine-generated outputs into meaningful narrative structures [5]. In addition, the cognitive theory of creativity helps explain the division of labor between humans and AI. Creativity is often understood as involving both divergent thinking (idea generation) and convergent thinking (idea selection and refinement). AI systems are particularly effective in supporting divergent thinking by generating multiple variations of plots, characters, and dialogues [1,5]. However, convergent thinking, especially tasks involving emotional depth, narrative coherence, and cultural interpretation, remains primarily a human capability [2,3]. This distinction explains why AI can enhance efficiency but cannot independently produce fully developed screenplays.

2.5 System-Level and Contextual Theories

Moreover, technological affordance theory suggests that AI's role in scriptwriting is shaped not only by its technical capabilities but also by how screenwriters perceive and utilize these capabilities in practice. Writers actively interpret AI outputs, adjust prompts, and integrate suggestions based on creative intent, production constraints, and narrative goals [7]. As a result, AI does not determine creative outcomes directly; instead, outcomes emerge from the interaction between tool capabilities and human agency [6]. In addition, cultural production theory emphasizes that creative works are embedded in broader social and cultural systems. Chateau et al. highlight that cultural background and audience expectations significantly influence narrative structures, character design, and storytelling styles [8]. In AI-assisted scriptwriting, this means that machine-generated content must be filtered and adapted to align with cultural norms and audience interpretation frameworks. Screenwriters thus function as cultural mediators who ensure that AI-generated material is contextually appropriate and emotionally resonant [8]. Finally, socio-technical systems theory provides a broader perspective on AI integration in creative industries. It suggests that technological tools, human actors, institutional norms, and production environments interact as a unified system. In scriptwriting, AI is not an isolated tool but part of a larger ecosystem involving industry workflows, intellectual property regulation, production constraints, and audience segmentation [2,4]. Therefore, the impact of AI cannot be understood solely at the technical level; it must also be analyzed within its institutional and cultural context [4,7].

Overall, these theoretical perspectives collectively suggest that AI should be understood as an augmentative system within a human-centered creative framework. While it enhances ideation, efficiency, and structural support, it does not replace human cognitive, emotional, or cultural functions. This theoretical foundation provides a basis for analyzing AI applications, user attitudes, and ethical implications in the following sections.

3. Literature Review

3.1 AI in Screenwriting Applications

AI is mainly used in screenwriting to support idea generation, plot structuring, and dialogue refinement. First, in ideation, Dayo et al. found that AI tools can quickly generate multiple story ideas and character concepts, enabling screenwriters to explore different narrative directions efficiently [1]. This is particularly useful in the early drafting stage, allowing writers to experiment with plot variations while maintaining creative control [3]. Second, in structuring, Tsiavos and Kitsios argue that AI influences not only writing but also broader film production processes such as scheduling, production planning, and editing [2]. These functions indirectly support narrative coherence and production efficiency. Third, at the micro level of writing, Cake notes that AI can generate dialogue fragments and subplots that writers can refine and integrate into the main story [5]. Tang et al. further highlight that screenwriters use AI to test alternative narrative branches and compare audience appeal [6]. Overall, AI functions as an assistive tool that improves efficiency, while creative judgment remains human-driven [2].

3.2 Screenwriters' Attitudes and Practices

Screenwriters' attitudes toward AI vary significantly depending on experience and project context. Tang et al. found that some screenwriters actively use AI-generated ideas to expand creative possibilities, while others remain cautious due to concerns about originality and stylistic dilution [6]. Vainikka et al. emphasize that "prompt engineering" has become an important skill for effectively guiding AI outputs [7]. Tang et al. further argue that even in AI-assisted workflows, human writers retain final control and must edit AI-generated content to ensure narrative consistency and coherence [8]. Chateau et al. also note that acceptance of AI varies across cultural and professional contexts [8]. Additionally, Tsiavos and Kitsios suggest that AI can reduce repetitive tasks, allowing writers to focus more on core creative expression [2]. Overall, AI is primarily viewed as a supportive tool, with human judgment remaining central.

3.3 Ethics and Copyright Issues

AI-generated content introduces significant ethical and legal challenges. Gaffar & Albarashdi point out that the originality and ownership of AI-generated works remain legally ambiguous, potentially leading to copyright disputes [5]. Tang et al. emphasize the need for creators to balance AI assistance with personal

creative responsibility to avoid plagiarism concerns [6]. Cake notes that AI should be viewed as a collaborative tool rather than an independent author, with final creative responsibility remaining with humans [8]. Dayo et al. also warn that uncritically using AI-generated text may negatively affect originality and quality [1]. These findings highlight the importance of ethical awareness in AI-assisted creation.

3.4 Cultural and Audience Influences

Cultural background and audience expectations significantly shape how AI is used in scriptwriting. Chateau et al. argue that cultural differences and audience preferences influence narrative design, character development, and dialogue structure [8]. For international audiences, AI-generated content often requires manual adaptation to ensure cultural appropriateness. Cake also notes that AI-generated scripts must be adjusted according to audience expectations to remain engaging [8]. Vainikka et al. further emphasize that screenwriters must adapt AI outputs to different narrative traditions and market demands [7]. Tsiavos and Kitsios add that although AI can generate multiple versions of a story, human selection and refinement remain essential [2].

3.5 AI Skills and Collaboration Techniques

As AI becomes more widely used, screenwriters need new skills to collaborate effectively. Vainikka et al. highlight prompt engineering as a key competency for guiding AI outputs [7]. Tang et al. note that writers must actively revise and integrate AI-generated content to ensure narrative coherence [6]. Dayo et al. emphasize that while AI can handle repetitive tasks, creative decision-making remains human-led [1]. Cake further argues that AI is reshaping scriptwriting into a collaborative human-machine process, where AI supports ideation but humans retain artistic authority [5].

4. Discussion

Current research indicates that AI primarily assists in idea generation and structural development, while humans retain final creative authority. Dayo et al. suggest that AI can quickly generate multiple story ideas, supporting early-stage creativity [1]. This is particularly useful in the early drafting phase, where writers can explore broader narrative possibilities and reduce initial creative constraints. However, Tsiavos and Kitsios argue that AI lacks a deep understanding of emotion and cultural context, limiting its ability to independently produce meaningful narratives [2].

Although AI can generate structurally coherent text, it often struggles with long-term narrative consistency, emotional depth, and culturally embedded meaning, all of which are essential in professional screenwriting. Screenwriters' attitudes significantly influence AI usage. Some actively adopt AI tools for inspiration and efficiency, while others remain cautious due to concerns about originality and creative control [6]. Vainikka et al. emphasize that effective use of AI depends on prompt design and iterative refinement, which requires new technical-creative skills [7]. Tang et al. further confirm that human oversight is essential to ensure coherence and narrative quality [6]. Ethical and copyright issues remain a major concern. Gaffar & Albarashdi highlight uncertainty regarding ownership of AI-generated works, which may lead to legal disputes in creative industries [5]. Cake also argues that AI should function as a supportive tool rather than an independent author, with final creative responsibility remaining with humans [5]. These issues highlight the need for clearer legal and professional frameworks. Cultural and audience factors further shape AI applications. Chateau et al. note that AI-generated content must be adapted to cultural contexts to ensure narrative relevance and audience engagement [5]. Without such adaptation, outputs may appear generic or fail to resonate with specific audiences. Overall, AI provides clear advantages in efficiency, ideation, and structural support. However, it cannot replace human interpretation, emotional intelligence, or cultural understanding [1-3,5-7]. Its role is best understood as augmenting, rather than replacing, human creativity in screenwriting.

5. Conclusion

In general, artificial intelligence has become increasingly common in script creation. It assists screenwriters in generating ideas, organizing story structures, and optimizing dialogue. AI improves efficiency and reduces repetitive workload, allowing writers to focus on core creativity, characterization, and emotional expression.

However, AI cannot replace human creativity and judgment. Screenwriters remain the ultimate decision-makers responsible for narrative logic, coherence, and artistic style. The effectiveness of AI depends largely on the user's skill in guiding and refining outputs. Moreover, cultural background, creative environment, and audience expectations also influence how AI is used in scriptwriting. Future development of AI technology may further deepen human–AI collaboration, particularly in understanding how different stages of scriptwriting benefit from AI assistance. In conclusion, AI is an important supportive tool in modern screenwriting. It enhances efficiency and creativity, but the final artistic value of a script still depends on human creators.

References

- [1] Dayo, F., Memon, A. A., & Dharejo, N. (2023). Scriptwriting in the age of AI: Revolutionizing storytelling with artificial intelligence. *Journal of Media & Communication*, 4(2). <https://doi.org/10.46745/ilma.jmc.2023.04.01.02>
- [2] Tsiavos, V., & Kitsios, F. (2025). The digital transformation of the film industry: How artificial intelligence is changing the seventh art. *Telecommunications Policy*, 49, 103021. <https://www.elsevier.com/locate/telpol>
- [3] Tang, Y., Li, H., Lan, M., Ma, X., & Qu, H. (2025). Understanding screenwriters' practices, attitudes, and future expectations in human–AI co-creation. *arXiv preprint*. <https://arxiv.org/abs/2502.16153>
- [4] Gaffar, H., & Albarashdi, S. (2024). Copyright protection for AI-generated works: Exploring originality and ownership in a digital landscape. *Asian Journal of International Law*, 15, 23–46. <https://doi.org/10.1017/S2044251323000735>
- [5] Cake, S. (2025). Artificial intelligence as a collaborative tool for script development. *Media Practice and Education*, 26(3), 1–16. <https://doi.org/10.1080/25741136.2025.2454074>
- [6] Tang, Y., Zhou, J., Li, H., Xie, X., Ma, X., & Qu, H. (2026). How do human creators embrace human–AI co-creation? A perspective on human agency of screenwriters. *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI '26)*. <https://arxiv.org/abs/2602.06327>
- [7] Vainikka, E., Soronen, A., & Kallio, S.-M. (2025). Is prompt engineering the future of screenwriting? Views of professional screenwriters and commissioners about the impact of AI technologies on their profession. *Critical Studies in Television*, 20(1), 54–72. <https://doi.org/10.1177/17496020241269277>
- [8] Chateau, L., Arora, P., & Herman, L. (2025). Cross-cultural approaches to creative media content in the age of AI. *Media, Culture & Society*, 47(5). <https://doi.org/10.1177/01634437251328188>

Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest.

Acknowledgment

This paper is an output of the science project.

Open Access

This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

