

A Study on the AIGC-enabled Teaching Paths and Practices in Film Scriptwriting and Audio-Visual Language across Universities

Xiaoming Wang

College of Art, Liaoning Communication University, Shenyang 110136, China

Abstract

This study systematically explores the application logic, practical paths, and reflective strategies of Generative Artificial Intelligence (AIGC) technology in the teaching of drama, film, and television literature, as well as audio-visual language in higher education institutions. Addressing practical challenges in traditional pedagogy-such as the detachment between script texts and visual language, high pre-visualization costs, and lengthy feedback cycles-this paper proposes an integrated pedagogical workflow: "LLM-assisted script incubation - Prompt engineering-driven audio-visual language reconstruction - Dynamic pre-visualization presentation - Processual and portfolio-based evaluation." Through in-depth observation and evaluation of teaching practices, this research analyzes the efficacy of AIGC in enhancing students' standardized audio-visual expression and accelerating creative iteration. Furthermore, it offers coping strategies for potential risks, such as algorithmic homogenization and the weakening of humanistic spirit, aiming to provide a practical reference for the digital transformation and pedagogical reform of film and television education in universities.

Keywords

Generative AI, Higher Film and Television Education, Scriptwriting, audio-visual language, pedagogical reform, human-AI collaboration.

1. Introduction

In recent years, Large Language Models (LLMs) and Diffusion Models, which are part of Generative Artificial Intelligence (AIGC) technologies, have undergone a leapfrog evolution, which has affected the whole process of digital content creation and film art creation. Since its earliest text and image generation up to the current multimodal generation of dynamic video, intelligent color grading, and audio synthesis, AIGC has been slowly redefining the paradigms and technical processes of the film and television industry. College degrees in Drama, Film, and Television have two characteristics, namely humanistic art creation as well as technology usage. The radical shifts in the technology of the frontline industry have put the conventional methods of talent cultivation and the structure of courses under a threat they have never experienced before.

The art of writing scripts and audio-visual language are traditionally taught as two independent subjects in traditional curricula. Nevertheless, in accordance with the laws of artistic creation, text and visual image are an inseparable entity. The current film education in universities is limited by conventional approaches to teaching and practice and has three major operational pain points:

To begin with, the gap between the textual thinking and audio-visual thinking is extremely strong. Students in Scriptwriting frequently stay within the bounds of desk work, text writing and literary refinement, but they have no intuitive training on how to transform text into camera language, spatial staging, and lighting composition. On the other hand, in the course of Audio-Visual Language, activities can be readily separated into particular dramatic conflicts

and character motivations with the loss of literary value of the work as it is reduced to mechanical film-parsing and disjointed imitation of shots.

Secondly, the level of pre-visualization threshold and cost are still too high. One of the important parts of filmmaking is changing a script into storyboards and pre-vis films that help in checking the shot logic and editing pace. Nevertheless, conventional storyboarding requires strong drawing abilities or knowledge of sophisticated 3D modeling programs. With the restricted time allocated to classes, majority of students cannot come up with good quality storyboards or dynamic pre-visualizations, and this leads to high costs associated with trial and error in the process of production, when design errors can be detected only at the stage of shooting or editing.

Third, the instructional evaluation mechanism does not have a diagnosis of the process or immediate feedback. Conventional assessment of assignments depends on the final static scripts or brief completed videos. The concept of this so-called summative evaluation does not allow instructors to follow the changes in students thoughts and ideas in ideation, text decomposition, and choice of visual symbols, which hinders them to provide the necessary aid with critical conceptual points.

In view of such issues, it is reasonable to adopt AIGC as a supplementary form of art appreciation and develop a technical route towards a human-AI cooperation in order to achieve the digitalization of high-quality film training.

2. Theoretical Logic and Mechanism of AIGC-Empowered Film Pedagogy

2.1. Constructivist "Instant Context" Creation.

The constructivist learning theory states that knowledge is actively built by learners in particular environments and socio-cultural backgrounds based on the process of meaning-making instead of passive transmission by teachers. The mention of constructivist models points to the fact that learners are active in technology-rich environments. Students in conventional film education, which has limited venue facilities, hardware, and time, have difficulty getting real-time visual feedback in class[1].

AIGC is a cheap and efficient way to create an instant virtual context. Students can transform the abstract notion of scripts into highly precise concepts of art or shot frames by writing in natural languages in just a few seconds. In this fast process of: Prompt Input Image Generation Aesthetic Assessment Prompt Adjustment, students are able to develop their knowledge of camera angles, lighting atmosphere, color tone and composition through inexpensive trial and error.

2.2. Reducing Extraneous Cognitive Load to Focus on High-Order Artistic Thinking.

Based on the Cognitive Load Theory, human cognitive capacities are finite. The resources of high-order thinking and deep understanding that should be utilized by learners when working on complex operations (germane cognitive load) are greatly restricted when learners use all their cognitive resources on tedious operational tasks (extraneous cognitive load)[2].

On a typical audio-visual language course, a student may expend large amounts of energy because of technical constraints such as poor drawing ability or rendering mistakes. The AIGC manages simple visual expression and image generation, which frees up students of excessive mechanical technique training. The introduction of the AI tools has the potential to reduce considerably the operational friction and develop critical and creative problem-solving ability. It allows students to redirect their attention to more high-order artistic choices including dramatic structure, character arcs, visual narrative, and thematic expression, thus changing the

emphasis in education to aesthetic criticism and creative expression instead of technical drawing.

3. Practical Path of AIGC-Empowered Scriptwriting and Audio-Visual Language Teaching

In order to address the disconnect between textual descriptions and practical teaching procedures, this paper constructs a complete end-to-end practical teaching framework. Table 1 presents the integrated pedagogical workflow for AIGC-empowered film education.

Table 1. Integrated Teaching Workflow of AIGC-Empowered Scriptwriting and Audio-Visual Language Teaching

Teaching Stage	Core Learning Goal	AIGC Application Mode	Main Student Tasks
Text Composition	Idea incubation, conflict building, logic validation	LLM dialogue and character roleplay	Write character profiles, test conflicting dialogues, validate three-act structure logic
Audio-Visual Translation	Standardized audio-visual expression, concept art generation	Text-to-Image diffusion models	Convert script into parameterized prompts (shot type, focal length, lighting) and generate concept art
Pre-vis Synthesis	Dynamic shot control, montage rhythm control	Image-to-Video generative models	Control camera movement trajectories (pan, tilt, zoom, dolly) and complete 30-second pre-vis
Instructional Evaluation	Processual diagnosis, human-AI collaboration assessment	Prompt Logbook analysis	Submit complete creative portfolio (Prompt log, concept art, pre-vis video, reflection report)

3.1. Scriptwriting Pedagogy: LLM-Assisted Creative Incubation and Logic Refinement.

LLMs should be presented in scriptwriting as the screenwriting assistant and critical interlocutor instead of being a direct substitute of human writing. The main practices are:

3.1.1. Roleplay and Psychological Testing.

Students build character profiles that have particular personality characteristics and background prompts in order to simulate adversarial discussion, examining the feasibility of dramatic disagreement. By doing that, students are able to determine if a discourse is not having individuality and actively improve it.

3.1.2. Structural Logic Check and Evaluation.

The students use outlines or summaries of scenes to enter them into the system and have the LLM assess the dramatic structure. To help students recognize causal loopholes, pacing problems and weak climaxes, the strengths of AI in information retrieval and pattern recognition can be used.

3.2. Audio-Visual Language Pedagogy: Parameterized Expression via Prompt Engineering.

Prompts in audio-visual language instruction are used to be both a source of control inputs to the AI but also an external manifestation of how precisely students can think visually. Instructional design aims at changing ambiguous « artistic intuition » concept into the form of standardized « audio-visual terminology ».

3.2.1. Standardized Input of Audio-Visual Elements.

The standard professional film vocabulary in writing prompts must be used by the students, i.e. stating shot size (close-up, medium shot, wide shot), camera angle (eye-level, high-angle, low-angle), lighting style (Rembrandt lighting, high-contrast low-key, soft light) as well as focal length (24mm wide-angle, 85mm telephoto). This obligatory practice of using parameters makes students learn standard audio-visual language.

3.2.2. Dynamic Storyboarding and Montage Pre-visualization.

With Image-to-Video applications, learners transform the concept art in static form into a video clip with moving cameras. They may experiment with different camera paths (push, pull, pan, track) as well as shot editing methods (cross-cutting, contrast montage) in order to gain an intuitive understanding of how audiovisual synthesis affects emotional expression. These digital pre-visualization processes have gained more and more attention as filling in the gap between script ideas and cinematic action[4].

3.3. Reconstructing the Evaluation System: Processual Portfolios and Interaction Logs.

Conventional single-submission evaluation cannot assess how students think in real life in the presence of AIGC assistance. Pedagogical reform therefore highlights the need to have a varied processual assessment model:

3.3.1. Prompt Logbook Assessment Mechanism.

The pupils should keep all the raw interaction records with AI, such as first prompts, malfunctioning generated content, corrected prompts, and last parameters. Instructors assess the ability of students to formulate problems, their aesthetic judgement and accuracy in the use of control terms by examining these logs.

3.3.2. Comprehensive Creative Portfolio.

Final grade is made up of Creative Proposal (20), Prompt Logbook (30), Static Storyboard and Previs Video (30) and Artistic Reflection Report (20) which achieves the dual evaluation of learning process and creative final work.

3.4. Practical Application and Reflection

The implementation of this human-AI collaboration in a 32 hours Genre Film Remake Practice course with 54 students majoring in film at a university produced a number of important observations and lessons:

3.4.1. Efficacy of Practical Application.

Accelerated Visual Ideation. The students quickly transformed the textual thoughts into clear high-definition concept art which reduced the time between the concept and the visual representation of it. The discussions in groups were about the actual visual images which enhanced the efficiency of communication and the quality of interactive teaching.

3.4.2. Standardized Terminology Mastery.

Since image algorithms are very responsive to keywords, students were able to enhance the accuracy of their professional vocabulary (shot size, lighting, composition) as they polished the prompts, eliminating nonspecific terms such as good or nice effect[5].

3.4.3. Enhanced Pre-vis Completion.

With the help of generative video resources, all groups were able to submit short pre-vis videos with moving cameras and sound tracks during working hours and completed dynamic montage pre-visualization training in the classroom successfully.

3.5. Pedagogical Reflection and Countermeasures.

Defending against Homogenization and Algorithmic Inertia. Generative AI models will by nature generate images that follow average probability distributions. There were some of the students who fell under the trap of superficial polish and used popular online keywords that generated repetitive visual style. Teachers should apply secondary creation constraints including manual retouching, composite editing and personal style injection[3].

3.6. Upholding Humanistic Care and Real-World Experience.

Cinematic art is based on profound understanding of human emotion, life experience, and societal reality. It is important to remind students that AI has assets and images but it cannot take the place of human perception of life. The technology ought to be supportive, directing students to make use of authentic lived experience as the basis of their art to prevent rich in visuals but poor in emotions pieces.

4. Summary

The quick development of AIGC is changing the underlying paradigm of the movie-making process. Universities must not be too conservative towards technology and film pedagogy should not be dependent on algorithmic instruments. Introduction of the workflow, which includes LLM-assisted script incubation, audio-visual language reconstruction based on prompt engineering, dynamic pre-visualization presentation and processual and portfolio-based evaluation, can successfully address conventional problems such as text-visual separation, excessive pre-vis, and slow evaluation feedback. Teachers ought to reason and think critically so that the human factor does not take a backseat in the making of art but rather, use AIGC to broaden creative limits and enhance knowledge of audio-visual concepts.

Acknowledgments

This work was supported by the educational reform project funds of Liaoning Communication University.

References

- [1] Piaget, J. (1952). *La genese de lintelligence chez lenfant*. International Universities Press.
- [2] Sweller, J. (1988). Cognitive load in problem solving: Its effects on learning. *Cognitive Science*, 12, 257–285.
- [3] Holmes, W., Porayska-Pomsta, K., Holstein, K., Sutherland, E., Baker, T., Shum, S. B., et al. (2022). The ethics of AI in education: An attempt at a community-wide framework. *International Journal of Artificial Intelligence in Education*, 32(3), 504–526.
- [4] Proferes, N. T. (2001). *Film directing master fundamentals: From script to screen*. Focal Press.
- [5] Strunk, W., Jr., & White, E. B. (1979). *The elements of style* (3rd ed.). Macmillan.