

Research on Intergenerational Challenges and Collaborative Mechanisms Between Teachers and Students in AIGC Art Education in Universities From the Perspective of Postfigurative Culture

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Abstract: Under the background that generative artificial intelligence (AIGC) technology empowers art education, this paper addresses intergenerational contradictions between teachers and students in AIGC art education in universities from the perspective of postfigurative culture, including the reconstruction of creative rights, conflicts in creative ontology, and dilemmas in ethical cognition. It integrates Margaret Mead’s postfigurative culture theory and the technical characteristics of AIGC art creation to construct a four-dimensional collaborative mechanism: Ideology – Teaching – Evaluation – Ethics. Ideological collaboration is realized by establishing a teacher-student learning community based on intellectual humility; teaching collaboration is achieved by implementing layered teaching of technical logic and artistic intuition; evaluation collaboration is fulfilled by promoting a composite evaluation system of “white-boxization” and “incremental value”; ethical collaboration is completed by building an ethical system that shifts from defensive prohibition to contractual consensus. This study establishes a systematic analytical framework connecting the technical characteristics of AIGC with intergenerational relations in art education.

Keywords: Postfigurative culture; AIGC; Art education; Intergenerational challenges; Collaborative mechanisms

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1. Introduction

The wide application of generative artificial intelligence (AIGC) in content creation, education, medical care and other fields has triggered a global urgent demand for AIGC talent training. In recent years, governments around the world have successively issued relevant policies to promote AIGC technology and talent ecosystem construction. In August 2025, the State Council issued the “Opinions on Further Implementing the ‘AI +’ Action”^[1], which clearly proposed to strengthen talent team construction, promote artificial intelligence in full-stage education and general education of the whole society, improve the diversified evaluation system,

and deepen the integration of AI with various fields. The EU's *AI Act* emphasizes an education framework that values both ethics and skills.

At present, AIGC technologies represented by generative adversarial networks (GANs) and diffusion models have deeply intervened in the entire process of artistic creation. This has not only brought innovation to creative tools and teaching methods but also triggered a structural reconstruction of power relations among educational subjects. Empowered by AIGC, students have gained a discourse power that is hard to reach in traditional educational relationships, which has raised new issues in educational ethics.

In the theoretical framework of prefigurative, cofigurative and postfigurative culture proposed by Margaret Mead^[2], postfigurative culture especially emphasizes a new cultural transmission mode in which the younger generation passes knowledge to the older generation. This mode is reshaping the pattern of intergenerational relations in the field of education. The phenomenon of “cultural feedback” foreseen by postfigurative culture theory shows a more complex practical form in the field of AIGC art education: the younger generation has become carriers of new knowledge with their own technical acumen^[3], while traditional educators face the dual challenges of deconstructed authority and reshaped roles.

Based on the integration of postfigurative culture theory, this paper proposes a four-dimensional collaborative mechanism of “Ideology – Teaching – Evaluation – Ethics”, providing a systematic solution to resolve intergenerational contradictions in AIGC art education.

2. Research status

The rapid development of AIGC technology has brought a structural impact on the development model of traditional art education. Wang Zhihui et al.^[4] pointed out that traditional education itself emphasizes students' active participation and interaction in the learning process. Although the “fast-food” workflow of AIGC improves efficiency, it to some extent replaces the immersive experience and active thinking that learners should have in education. This may lead students to ignore the in-depth understanding of knowledge and the cultivation of critical thinking. Therefore, a benign collaborative relationship needs to be formed among educators, students and AIGC technology.

Li Haojun et al.^[5] used AIGC technology to optimize classroom teaching practice and constructed a learning-centered teaching model of human-AI collaborative iterative symbiosis. However, it also faces problems such as students' academic integrity and various considerations of ethical risks.

Xin Jixiang et al.^[6] proposed that teacher-student communication in the postfigurative culture era is characterized by cultural feedback, equal dialogue and cooperative interaction. It emphasizes that teachers need to change their traditional roles, become lifelong learners, learn from students in turn and improve their information technology literacy.

Li Yazheng and Liu Hongquan's^[7] research pointed out that in the practical teaching of AIGC application, we should not only focus on skill cultivation, but more importantly, pay attention to the cultivation of ethical literacy and risk awareness, continuously improve the sense of social responsibility and ethical cognition required for the application of AIGC technology, so as to reduce ethical risks in use.

Epstein et al. (2023)^[8] introduced the MHC framework into the field of AIGC art, proposing that the output of AIGC generation systems must reflect the intentions of human creators, the system must be predictable and controllable, and humans bear ultimate responsibility for the output results. This framework provides a direction for the construction of a collaborative mechanism. Teachers and students in postfigurative culture are collaborative creators centered on “human creativity, with AIGC as an auxiliary tool”.

3. Analysis of Intergenerational Challenges Between Teachers and Students in AIGC Art Education in Universities

In the paradigm shift of artistic productivity caused by AIGC, students as “digital natives” have rapidly formed local advantages in technical operation compared with teachers as “digital immigrants” by virtue of their keen intuition and rapid adaptation to generative tools such as Midjourney, Sora and ComfyUI. This drastic change in knowledge structure has triggered profound intergenerational challenges in current university art education in three dimensions: power structure, creative ontology and ethical evaluation.

3.1. Structural reversal of knowledge power

In the traditional prefigurative cultural education model, teachers’ academic authority is largely based on “skill monopoly” and “experience accumulation”. Whether it is the perspective law in painting, or lens scheduling and non-linear editing software operation in film and television, all have high learning thresholds, and teachers are the “gatekeepers” of this threshold. However, the “text-to-generation” logic of AIGC has greatly lowered the technical threshold in a decentralized way.

In this context, the intergenerational challenge between teachers and students first manifests as the deconstruction and dislocation of knowledge power. Firstly, it shows the disappearance of technical authority. Students can skip the long handicraft training cycle and directly generate high-completion visual works through prompt engineering. The “basic technique teaching” that traditional teachers rely on depreciates in front of algorithm computing power, and some teachers even fall into a state of “technical aphasia” when facing rapidly iterating open-source models.

Secondly, it shows the identity anxiety of “preachers”. When students surpass teachers in mastering AIGC workflows, a typical postfigurative cultural feature – “reverse teaching” – appears in the classroom. This role reversal breaks the teachers’ preset psychological advantages and one-way knowledge transmission path, leading some teachers to develop defensive psychology and fall into deep anxiety about the legitimacy of their own teaching.

3.2. Ontological conflict of creative cognition

The deep logic of intergenerational challenges lies in the cognitive tear between teachers and students on the ontological question of “what is artistic creation”. Traditional art and film education highly emphasize “embodied cognition”, believing that creation is a physical process in which the body, materials and inspiration are deeply integrated. “Hand-eye coordination” and “process experience” constitute the intrinsic value of works.

After the intervention of AIGC, teachers and students have completely different views of time, space and values in aesthetics and creative cognition.

Teachers (elders) adhere to “aura” and proceduralism: Immersed in traditional aesthetics, teachers often examine works with a Benjamin-style “aura” filter, valuing the insight and accumulation in the creative process and the deep humanistic care for the real world. In their view, the “disembodied” generation of AIGC cuts off the tactile connection between creators and physical media, replaces the subject’s life experience with algorithm splicing, and often works flow into the spectacle pileup of “plastic sense”. Teachers also generally worry about students losing basic modeling ability.

As a generation growing up in the postmodern visual consumption context, students are more inclined to regard AIGC as an “external brain” and “efficiency plug-in”. They transform from “creators” to “curators” or

“conductors”, paying more attention to the impact and generation efficiency of the final visual effect.

This cognitive break leads to frequent misalignment of aesthetic evaluation in teaching: high-precision, high-concept generated images that students are proud of are often deconstructed by teachers on the grounds of “lack of soul” and “lack of life texture”. Both sides need to reach a consensus on the boundary between “algorithmic aesthetics” and “humanistic aesthetics”.

3.3. Ethical dilemma of teaching evaluation

The arrival of postfigurative culture does not mean a smooth transition of the original order. In AIGC art education, this transition has triggered sharp pains in academic ethics and evaluation mechanisms. The traditional university art education evaluation system is based on “author-based”, emphasizing independent conception, original expression and positive feedback of working time.

However, the black-box operation of AIGC and copyright disputes over large model training data have involved both teachers and students in complex ethical dilemmas:

First, the crisis of authorship and evaluation failure. When works submitted by students mix personal conception and AI randomly generated intentions, the “originality” indicator in the traditional evaluation system fails. Teachers find it difficult to quantify the specific proportion of “human creativity” and “machine computing power” in works, making the traditional scoring standards based on “process effort” and “skill proficiency” lose their scale.

Second, intergenerational cognitive differences in academic integrity. Students growing up in the “open-source mashup culture” often lack sensitivity to the copyright boundaries of data crawling and model fine-tuning (such as training LoRA models), tending to regard them as legal “digital sampling”. Teachers adhering to traditional academic norms are very likely to define them as “plagiarism” or “academic misconduct”.

This fault in ethical standards forces teachers to shift a lot of energy from “creation guidance” to “AI duplicate checking and authentication”, which not only consumes academic trust between teachers and students, but also highlights the hysteresis of the existing education system in responding to the iteration of technical paradigms.

4. Construction of collaborative mechanisms in AIGC art education in universities from the perspective of postfigurative culture

4.1. Ideological collaboration

4.1.1. Cultural feedback – from one-way instillation to two-way mutual education

In the traditional prefigurative culture perspective, teachers are regarded as monopolists of knowledge and judges of truth. The first step in constructing a collaborative mechanism is to legally empower students with cultural feedback in terms of system and culture, and elevate learning from students from teachers’ personal cultivation to a new type of educational ethics.

The black-box nature of AIGC technology determines that no individual can fully grasp all its emergent capabilities. Teachers should take the initiative to remove the professional mask of omniscience. “Intellectual humility” is a sober, realistic and non-defensive acceptance of one’s own cognitive boundaries. Against the background of the increasingly popular AI “black box” technology^[9], educators must learn to “live with uncertainty”, and their core ability is shifting from simple knowledge imparting to critical evaluation of algorithm-generated content.

This does not mean the loss of teachers' authority, but the transfer of the source of authority, from "having knowledge" to "organizing and criticizing knowledge". A reverse tutor mechanism should be established in the system: in technical links involving tool operation, plug-in update and fine-tuning, students are formally authorized as "technical lecturers" to teach on stage, while teachers retreat to guides and questioners^[10]. Through ritual role exchange, teachers' cognitive shame in technical blind spots is eliminated, making postfigurative culture a normalized teaching landscape.

4.1.2. Establish emotional connection based on "common vulnerability"

Skill complementarity can be regarded as rational collaboration; at the perceptual level, emotional links and resonance are needed. At the emotional level, teachers can share concerns about "possible deprivation of artistic subjectivity" with students more frankly, quickly narrowing the distance between teachers and students.

At the action level, teachers and students are no longer in an antagonistic relationship of assessment and assessment. Their common goal has also changed: in this algorithm-dominated era, how to ensure that human creativity and dignity are respected through human-computer collaboration, and better make AIGC serve humans. AI should be regarded as a partner to expand human imagination, not a replacement for humans^[11].

In general, the core of ideological collaboration is: teachers accept students' technical empowerment through "intellectual humility", and students understand teachers' professional persistence through "emotional empathy". This new type of teacher-student relationship based on "two-way empowerment" will lay an important psychological cornerstone for the subsequent teaching model reform and evaluation system reconstruction.

4.2. Teaching collaboration

4.2.1. Role reconstruction and collaboration paradigm

The ideal paradigm of "all-round craftsman" in the traditional master-apprentice system has collapsed in postfigurative culture. This study advocates for reconstructing the relationship of teaching subjects into the "CTO (Chief Technology Officer) + CD (Creative Director)" collaboration model in the modern creative industry.

First, students release computing power as "CTO": using digital natives' acumen in tool iteration, empowering students with dominance in technical implementation paths. Students' responsibilities shift from simple "homework completers" to "prompt engineers" and "model trainers", exploring the boundary of possibilities generated by AIGC.

Second, teachers control aesthetics as "artistic directors", that is, teachers' authority shifts from "technique demonstration" to "value judgment". In this model, teachers no longer struggle with software operation details, but focus on the style positioning, historical context sorting and ethical review of works. Teachers use profound accumulation in art history to conduct convergent screening and revision of the huge image library generated by students, ensuring that works do not become random piles of algorithms. This cycle of "student output – teacher value judgment" realizes accurate complementarity of intergenerational advantages.

4.2.2. Phased technical truce strategy

To resolve teachers' concerns about disembodied creation after AIGC intervention, curriculum design must establish a connection between efficiency and experience. The "phased technical truce" strategy can be adopted, dividing the course into two completely different but mutually supporting time and space fields.

The first stage is the AIGC sprint zone. In the creative conception and sketch stage, the use of AIGC tools is fully opened. Students are encouraged to use the randomness of AI to quickly generate hundreds of

scheme sketches and make rapid trials and errors. This stage aims to respond to students' demands for efficient creation and break the inertial stereotype of human thinking using algorithmic computing power.

The second stage is the embodied deepening stage. In the deepening production stage after the scheme is finalized, a “technical truce zone” is set up to force the return of the body. Students must break away from simple keyboard input, and conduct physical translation and reconstruction of AI-generated images through hand-drawn reconstruction, material experiments or physical model production.

Through this “disembodied – embodied” method, the teaching process not only accepts the acceleration of technology, but also retains the indispensable physical perception and humanistic temperature in art education.

4.3. Evaluation collaboration

4.3.1. From “result black box” to “process white-boxization”

In view of the randomness and inexplicability of AIGC-generated content, the traditional summative evaluation system has found it difficult to identify students' real creativity. A full-link generation log evaluation system needs to be established to force the “white-box” presentation of the creative process^[12].

First, explicit evaluation of prompt word logic: move the scoring focus from the visual shock of the final picture to the logical construction of “prompt engineering”. The core of evaluation should shift from “memory and reproduction” to “judgment and curation”^[13]. In the new scale, students need to submit iterative versions of prompts to prove how they gradually approach creative intentions by adjusting modifiers, weight parameters and negative prompts.

This not only responds to students' demands for recognition of mental work, but also allows teachers to exclude lottery-style work generation by reviewing the logical chain. An additional scoring dimension of “algorithmic criticism” is added. Students are required to explain in the closing report: what algorithmic biases or stereotypes were encountered in the generation process, and how to correct them through manual intervention. Through this reflective evaluation, ethical education is transformed from abstract moral preaching into specific creative links, so as to establish the subjective status of humans in the evaluation system.

4.3.2. Establishment of the principle of human-computer collaboration, incremental evaluation

In the face of teachers' concerns about the loss of students' basic abilities, the boundary between “assistance” and “replacement” is delineated in the system. The concept of “human-computer collaboration increment” is introduced, that is, human creators endow significant increments on the basis of AI-generated products, the evaluation weight of post-editing degree is increased, a graded evaluation standard is established, and the attribution of creativity is redefined.

AIGC should be regarded as a new cultural medium rather than an automated author. Therefore, the focus of evaluation should be on the selectivity and integration ability shown by students in the human-computer loop. Through this incremental evaluation, it not only recognizes the legitimacy of students using AI to improve efficiency, but also defends the decisive role of “humans” in artistic creation valued by teachers.

4.4. Ethical collaboration

4.4.1. Establish human-computer collaboration contract consensus

In view of the ambiguity of authorship caused by AIGC, it is proposed to introduce the principle of academic transparency for contractual management and the declaration system. At the beginning of the course, teachers and students should reach a contractual consensus, clearly specifying the proportion of AI intervention in the

three stages of sketch conception, scheme deepening and completion.

The key to maintaining academic integrity is not to ban tools, but to disclose the honesty of the process. It is recommended to implement a work component labeling system. When submitting homework, students need to mark the proportion of AI generation and manual correction, and list the models used. Through this visual ethical statement, teachers' suspicion of students' laziness is eliminated, and students' sense of responsibility for using tools is established.

The scope of intellectual fraud should be clearly stipulated in teaching management documents: only when students try to cover up the role of AI and disguise generated content as personal labor results should be defined as cheating; and open and reasonable use of AI to assist thinking should be regarded as legal academic gain.

4.4.2. “Red team testing” ethical teaching method

To cultivate students' ethical intuition in the AIGC era, ethical education must be transformed from boring theoretical preaching into vivid confrontational practice. Drawing on the concept of “red team testing” in the field of computer security, a special “algorithm fault-finding” course link is designed^[14].

Students are encouraged to take the initiative to attack algorithm models, induce them to generate images containing stereotypes, prejudices or logical fallacies, and conduct critical analysis. Understanding the ethical limitations of AI is a core literacy necessary for this generation of students. Through this reverse operation, students can deeply realize that algorithms are not objective truths, so as to establish a vigilance mechanism against mindless reliance on AI in the subconscious.

Teachers and students are organized to jointly analyze specific AIGC infringement cases or style plagiarism disputes, and conduct case-based ethical debates. In the debate, teachers are no longer high judges, but experienced guides, helping students find a balance between the efficiency temptation of algorithms and the moral bottom line of art. This process of reaching consensus in conflict is the best paradigm of intergenerational collaboration in postfigurative culture.

5. Conclusion

Margaret Mead believed that human beings will eventually enter a postfigurative cultural era in which “the elderly learn from the younger generation”. The changes brought by generative artificial intelligence in the field of university art education have greatly confirmed this view. Although the “skill inversion” brought by technological iteration objectively challenges the intergenerational relationship between teachers and students, it also contains an opportunity for reconstruction.

This study proposes a set of specific collaborative paths: ideological consensus and emotional links based on “intellectual humility”, layered teaching paths of technology and art, a “white-box” incremental evaluation system and an ethical collaboration system of contractual consensus. It transforms one-way knowledge imparting into a two-way, empowering practical path. In this process, students inject technical computing power, and teachers defend aesthetic ethics. This division of labor does not weaken teachers' sense of authority, but frees teachers from mechanical tool operation and refocuses on the core value of art education.

In this era of algorithm-generated everything, the dignity of art education does not lie in building a dam to resist the technological flood, but in teachers and students jointly meeting the challenges and opportunities of art education in the AIGC era through intergenerational collaboration and symbiosis.

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