Exploration of the "Human-Machine Collaboration" Teaching Model in Literary Theory Courses in the Era of AI-Generated Content

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Abstract: *The rapid advancement of AI-Generated Content (AIGC) has profoundly impacted the field of higher education. As a core component of traditional humanities disciplines, the teaching objectives, paradigms, and ecology of literary theory courses are facing an urgent need for structural reshaping. Based on the background of the AIGC era, this study aims to systematically explore the construction and application of the "Human-Machine Collaboration" teaching model in literary theory courses. The paper first analyzes how AIGC technology drives the shift in literary theory teaching from knowledge transmission to the cultivation of critical thinking and innovative ability. It then elaborates on the theoretical foundation of the "Human-Machine Collaboration" model in distributed cognition theory, explaining its theoretical implications and significant advantages in enhancing teaching effectiveness through the integration of intelligent and personalized approaches, as well as in reshaping the roles of teachers and students and their pedagogical relationships. Finally, the research constructs a comprehensive implementation path covering pre-class preparation, in-class discussion, and post-class evaluation, providing a solution with both theoretical depth and practical feasibility for the innovative transformation of literary theory education in the intelligent era.*

Keywords: *Human-Machine Collaboration; AIGC; Literary Theory; Teaching Model; Teaching Reform*

Introduction

With the increasing maturity of Artificial Intelligence-Generated Content (AIGC) technology, its capabilities in generating text and conducting preliminary analysis and interpretation pose a fundamental challenge to literary theory courses, which are centered on textual interpretation and theoretical speculation. Simultaneously, this presents a significant opportunity for innovating teaching models. The traditional teaching paradigm, which revolves around the instructor and classic textbooks, reveals structural limitations—such as diminished efficiency in information delivery and the potential induction of student "epistemological outsourcing" — when confronted with the immediate and panoramic knowledge services provided by AIGC. Therefore, exploring and constructing a "Human-Machine Collaboration" teaching model that effectively integrates the strengths of human and machine intelligence is not merely a simple issue of technological application, but a strategic necessity for maintaining the vitality, depth, and relevance of literary theory education in the new era. The significance of this study lies in its attempt to transcend superficial discussions of technology as a tool, aiming instead to reconstruct the course's objectives, processes, and evaluation systems from the perspective of teaching ontology, thereby providing a theoretical basis and practical pathway for the symbiotic development of humanities disciplines and intelligent technology.

1. Teaching Reform of Literary Theory Courses in the AIGC Era

1.1 Technological Innovation and the Intrinsic Drive for Literary Theory Teaching

The emergence of AIGC technology is not merely an external tool for literary theory teaching; rather, it constitutes a transformative force that profoundly intervenes at the level of pedagogical ontology. This intervention is first manifested in the restructuring of core teaching elements. Fundamental components such as text, interpretation, and creation in traditional teaching are endowed with new connotations and forms of existence within the AIGC context. Generative artificial

intelligence can instantaneously produce vast quantities of simulated texts, which challenges the authority and uniqueness of canonical works while simultaneously significantly expanding the boundaries of teaching and analytical materials.

More critically, AIGC models, through their massive training data and complex algorithmic logic, have themselves become a "non-human critical subject" imbued with specific interpretive paradigms and aesthetic biases. The analyses, summaries, and critiques they provide are not objective or neutral; rather, they reflect the models' internal parameterized knowledge structures. This technical characteristic intrinsically drives literary theory teaching to transcend mere knowledge transmission and shift toward cultivating students' critical thinking. This entails teaching students how to examine, analyze, and transcend machine-generated interpretations, thereby discerning the underlying data composition, algorithmic logic, and cultural standpoints. Ultimately, this allows students to establish the unique value of humanistic thinking within the interpretive dialogue between humans and machines [1].

1.2 Limitations of the Traditional Teaching Paradigm and Contemporary Challenges

In the new educational environment shaped by AIGC technology, the traditional instruction-based paradigm long dominant in literary theory classrooms reveals structural limitations. This paradigm establishes teachers and designated classic textbooks as the sole knowledge authority, with teaching processes emphasizing linear exposition of theoretical frameworks and one-way interpretation of core concepts. When confronted with the immediate and comprehensive knowledge services provided by AIGC, this model's advantage in information delivery efficiency becomes significantly diminished. Students can now acquire theoretical information and textual analyses far beyond the syllabus requirements through interactions with AI outside the classroom. Consequently, if classroom instruction remains confined to knowledge repetition and superficial interpretation, it will struggle to maintain its educational appeal and effectiveness.

The challenge presented by AIGC is dual in nature. Firstly, it imposes new demands on students' fundamental information processing and theoretical memorization capabilities, thereby reducing the effectiveness of traditional assessment methods. Secondly, it readily fosters a tendency toward "cognitive outsourcing," where students may become satisfied with ready-made conclusions provided by AI, consequently weakening their capacity for independent critical thinking and theoretical innovation. The educational domain must therefore transform from a "toll station" for knowledge transmission into a "training ground" for higher-order thinking, effectively addressing the impact of ubiquitous intelligent knowledge services [2].

1.3 The Shift in Core Teaching Objectives and Competency Restructuring

In response to the aforementioned challenges, the core teaching objectives of literary theory courses must undergo a strategic shift. The focus needs to transition from mastering established theoretical knowledge and analytical conclusions towards building a comprehensive theoretical literacy that enables synergistic coexistence with intelligent technology. This shift is concretely manifested in the redefinition and systematic restructuring of key student competencies.

The primary objective is to cultivate "critical human-machine interaction skills," meaning students should not only be able to utilize AIGC as a research aid but also be capable of evaluating the validity of its outputs, identifying logical flaws, and reflecting on its cultural biases. Secondly, the goal is to strengthen "complex theoretical thinking skills." Given machines' proficiency in handling standardized information, teaching should focus more on guiding students to engage with theoretical ambiguities, paradoxes, and unresolved debates, training their ability for dialectical thinking and autonomous judgment within multiple, even contradictory, interpretive frameworks.

Ultimately, teaching should aim to stimulate "creative theoretical construction capability." The powerful mimetic and integrative capacities of AIGC conversely necessitate that human education place greater value on nurturing theoretical insight stemming from unique individual life experiences, intuition, and imagination. The course evaluation system must correspondingly transform, shifting from assessing the memorization accuracy of theoretical knowledge to evaluating students' quality of thinking and innovative potential in formulating questions, arguing viewpoints, and generating new insights within a human-machine collaborative environment.

2. The Connotation and Advantages of the "Human-Machine Collaboration" Teaching Model

2.1 Theoretical Definition of the "Human-Machine Collaboration" Teaching Model

Within the teaching context of literary theory courses, the "Human-Machine Collaboration" teaching model represents a fundamental paradigm shift. Its core principle lies in constructing an organic teaching system where human intelligence leads and machine intelligence enhances. This model transcends the traditional perception of technology merely as an information delivery tool, emphasizing instead the deep coupling and functional complementarity between human cognition and artificial intelligence within the academic inquiry process [3]. Its theoretical foundation can be traced to distributed cognition theory, which posits that cognitive activities do not occur in isolation within an individual but are distributed across an entire system comprising individuals, external tools, and the cultural environment.

Within this theoretical framework, generative artificial intelligence serves as a powerful external cognitive node, undertaking tasks such as the preliminary processing of vast amounts of literature, the generation of multi-perspective interpretations, and the intelligent organization of academic corpus. This functional allocation enables teachers and students to liberate their limited cognitive resources from basic information processing, allowing them to focus more on higher-order thinking activities that require deep understanding, critical examination, and value judgment. Thereby, a dynamic, mutually shaping cognitive partnership between human and machine is formed, collectively constructing a continuously evolving cognitive ecosystem for teaching.

From the perspective of educational philosophy, this human-machine collaborative relationship redefines the role of technology in teaching. It is neither a passive tool entirely controlled by humans nor an autonomous agent replacing the teacher, but rather an "intelligent medium" with generative capacity. This medium not only expands the cognitive boundaries of teachers and students but also continuously stimulates new problem awareness and thinking pathways during the collaborative process, infusing literary theory teaching with unprecedented vitality and potential.

2.2 Teaching Efficacy Advantages Through the Integration of Intelligent and Personalized Approaches

The significant advantage of the "Human-Machine Collaboration" teaching model lies in its ability to achieve a dialectical unity between the efficiency of large-scale instruction and the depth of personalized learning, thereby fundamentally enhancing teaching effectiveness. The intelligent dimension is manifested in AIGC's capacity for systematic processing and dynamic modeling of the vast knowledge system of literary theory. The system can instantaneously construct network diagrams of theoretical concepts, automatically generate comparative interpretations of texts across different schools and periods, and even simulate virtual dialogues among prominent theorists. This provides an unprecedented three-dimensional cognitive landscape for classroom teaching. Such intelligent knowledge governance capability enables teaching to break through the limitations of traditional linear narratives, achieving multidimensional reorganization and dynamic interconnection of knowledge elements [4].

Support for personalized teaching stems from the powerful natural language processing and adaptive learning capabilities of artificial intelligence. By continuously analyzing students' learning trajectories, questioning patterns, and cognitive styles, AIGC can construct detailed learner profiles and accordingly provide fully customized academic support. This support includes, but is not limited to, recommending expanded reading materials aligned with individual interests, generating progressively challenging theoretical thinking questions, and offering specialized training targeting specific knowledge weaknesses, thereby achieving truly differentiated instruction. Throughout this process, AIGC functions as a continuously available academic advisor, building exclusive cognitive scaffolding for each learner.

The deep integration of intelligent and personalized approaches creates an educational environment that maintains the integrity of the knowledge system while respecting individual cognitive differences. In this environment, standardized knowledge transmission is efficiently accomplished through intelligent means, thereby enabling teachers to devote more energy to providing personalized guidance for students' thinking processes. This optimization of the teaching structure not only enhances the efficiency of knowledge transfer but, more importantly, opens up unique academic growth pathways for each student, making the study of literary theory a process filled with discovery and creativity. The

organic combination of these two elements thus forms a virtuous cycle in the teaching process, wherein intelligent methods expand the breadth of instruction, while personalized approaches ensure its depth.

2.3 Reshaping Teacher-Student Roles and Mutual Empowerment in Teaching Relationships

The implementation of the "Human-Machine Collaboration" teaching model inevitably triggers structural reshaping of the main educational roles and fundamental transformation of teaching relationships. The teacher's role undergoes a profound shift from "knowledge authority" to "academic guide." Their core responsibility is no longer the one-way transmission of information, but rather transforms into being an architect of learning scenarios, a curator of human-machine dialogues, and a catalyst for deep critical thinking. This role requires teachers to possess the ability to design open-ended inquiry topics, guide students in mastering methodologies for critically interrogating AI-generated content, and lead students toward theoretical innovation based on the multiple interpretations provided by machines. In this process, the teacher acts more as a metacognitive coach, focusing on cultivating students' thinking quality and academic judgment [5].

Correspondingly, the student's role undergoes a fundamental transformation from passive recipient to active inquirer. Throughout the learning process, students must develop a set of academic competencies for effective collaboration with intelligent systems. These include the ability to articulate theoretical needs precisely, the judgment to evaluate and filter AI-generated feedback, and the integrative capacity to internalize the outcomes of human-machine collaboration into their own theoretical insights. This transformation places students at the center of knowledge construction, making their academic growth an active, self-directed process.

This shift in roles facilitates a qualitative transformation of the teaching relationship from one-way knowledge transmission to mutual empowerment. Teachers stimulate students' academic autonomy through carefully designed human-machine collaborative tasks, while the novel perspectives and complex questions generated by students during their interactions with AI, in turn, enrich and deepen the teaching process, forming a virtuous instructional cycle. Consequently, the educational space transforms into an academic community characterized by human-machine symbiosis and mutual reinforcement between teachers and students. Within this community, knowledge is no longer an object to be transmitted, but rather an outcome that is continuously reconstructed through ongoing dialogue and collaboration.

3. Implementation Pathways and Strategies for the "Human-Machine Collaboration" Teaching Model

3.1 AIGC-Based Pre-Class Preparation and Personalized Learning Path Design

The initial phase of teaching implementation lies in the intelligent restructuring of the pre-class stage. Instructors can utilize generative artificial intelligence (AIGC) to conduct in-depth exploration of course content and dynamically generate teaching resources. Specifically, AIGC can perform genealogical analysis of core theoretical concepts, automatically generate background reading materials encompassing perspectives from different schools of thought, and pre-set various potential academic discussion directions. This intelligent approach to lesson preparation transcends the limitations of individual knowledge reserves, thereby constructing a more multi-dimensional theoretical context for classroom teaching.

In the design of personalized learning paths, the system can construct differentiated learning sequences based on students' prior knowledge assessment results and self-reported academic interests. By analyzing students' knowledge mastery and cognitive characteristics, artificial intelligence can push customized pre-class learning packages. These packages may include micro-lecture videos explaining specific theoretical concepts, supplementary literature adapted to individual reading levels, and guiding questions. This design ensures that each student enters the classroom with knowledge preparation matched to their cognitive foundation, thereby establishing the necessary prerequisites for in-depth discussions during class sessions [6].

The key to implementing this phase lies in establishing a dynamic feedback mechanism. The AI system continuously tracks students' interaction data during the pre-class preparation process, such as their attempts at thought questions, time spent on recommended materials, and annotation content. After analysis, this data not only optimizes subsequent personalized learning paths but also provides

teachers with precise insights into learning conditions. This enables instructors to adjust teaching focus and strategies in advance, achieving precision and foresight in instructional preparation.

3.2 Human-Machine Collaborative Discussion and Deep Critical Thinking in Classroom Settings

The classroom session serves as the core domain where the human-machine collaboration model demonstrates its critical thinking stimulation function. In this context, generative artificial intelligence assumes the dual roles of "dialogic partner" and "cognitive catalyst." Instruction can be designed around a seminar format centered on human-machine dialogue — for example, guiding students to critically interrogate preliminary interpretations of specific texts generated by AI, or requiring them to compare analytical approaches from different theoretical schools simulated by AI while examining their respective blind spots. This form of human-machine interaction directly positions students at the forefront of academic critique.

During this process, the teacher's responsibility is to guide the discussion toward greater depth by designing higher-order cognitive tasks that prompt students to move beyond the surface information provided by AI. Teachers may require students to analyze the implicit theoretical assumptions and value judgments underlying AI-generated content, investigate potential cultural biases in its training data, and even encourage students to attempt constructing new theoretical frameworks capable of refuting or surpassing AI-generated interpretations. This human-machine collaborative seminar model transforms the classroom from a venue for knowledge transmission into a space for intellectual confrontation and idea generation.

The core of this teaching strategy lies in creating productive "cognitive conflict." The diverse, and sometimes even contradictory, interpretations provided by AI can effectively break students' cognitive fixedness, compelling them to analyze, select, and integrate among various theoretical possibilities. This cognitive tension, rooted in human-machine dialogue, significantly stimulates students' critical thinking and theoretical innovation awareness, thereby substantially exercising their academic reasoning abilities through genuine interpretive challenges.

3.3 Human-Machine Interactive Creative Practice and Construction of a Multi-dimensional Teaching Evaluation System

The focus of implementation in the post-class stage lies in designing generative academic tasks that integrate human-machine interaction. Students may utilize AIGC tools for innovative attempts at theoretical application. For instance, they can instruct AI to imitate the style of a specific critical school to draft a critique, which the students then revise, deepen, and substantiate; or, they can collaborate with AI to complete a small-scale research design proposal, where the AI handles the initial literature review draft and preliminary data processing, while the students focus on refining the core argument and constructing the logical framework. Such creative activities aim to train students' comprehensive academic ability to utilize and transcend intelligent tools.

Matching this is the innovation of the teaching evaluation system, which needs to shift from singular knowledge assessment to multi-dimensional competency evaluation. The new evaluation system should incorporate process assessment, focusing on the quality of questioning demonstrated by students in human-machine collaborative tasks, their information screening ability, the degree of critical revision applied to AI-generated content, and the theoretical innovativeness of the final output. The evaluative focus shifts from the correctness of conclusions to the rigor and creativity of the thought process.

Finally, the evaluation subjects should also become more diversified, forming a composite system that includes teacher evaluation, AI-powered preliminary analysis based on rubrics, student self-assessment, and peer review. AI can provide rapid feedback on foundational indicators of student work, such as the accuracy of theoretical concept usage and the clarity of the argumentation structure, while teachers concentrate on assessing the depth of theoretical understanding, the acuity of critique, and the quality of synthetic innovation. This multi-dimensional evaluation system more comprehensively reflects the comprehensive theoretical literacy and practical abilities students demonstrate in a human-machine collaborative environment, thereby completing the closed-loop construction of the teaching model from objectives and processes to evaluation.

Conclusion

This study, through a systematic examination of the drivers for teaching reform in literary theory courses in the AIGC era, the conceptual advantages of the Human-Machine Collaboration teaching model, and its implementation strategies, demonstrates the significant potential of this model in stimulating students' higher-order thinking, promoting personalized learning, and reconstructing healthy pedagogical relationships. Human-machine collaboration does not aim to replace teachers with technology but, through functional complementarity, redirects the focus of teaching towards more creative theoretical speculation and knowledge construction.

Looking ahead, the further development of this teaching model depends on a more profound critical integration of the ethical dimensions of AIGC—such as its algorithmic biases and cultural limitations—into the core themes of teaching dialogue. Simultaneously, dynamically optimizing the interactive design of human-machine collaboration in the classroom and establishing long-term tracking evaluation mechanisms that better reflect students' comprehensive theoretical literacy will be crucial directions for future research. Ultimately, the vitality of literary theory education in the intelligent age will depend on its ability to successfully transform technological challenges into opportunities for deepening humanistic reflection.

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