Article

Research on Practical Challenges and Application Countermeasures of Ideological and Political Education in Colleges and Universities Under Artificial Intelligence Technology

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Abstract: With its rapid iterative development, artificial intelligence has profoundly transformed civic and ethical education in higher education institutions. AI-driven empowerment has brought about a series of advancements to this field, including data-driven precision teaching, optimized learning experiences, and innovative educational methodologies. However, technological integration also faces practical challenges such as data privacy concerns, over-reliance risks, the risk of superficial virtual education formats, and disparities in educational resources that compromise pedagogical effectiveness. These complexities highlight the intricate relationship between AI and ideological-political education. This paper conducts an in-depth analysis of real-world challenges posed by AI technology, including erosion of educational authority and pressure for content/methodological innovation. Through theoretical and empirical research, it proposes a series of innovative application strategies to facilitate effective implementation of ideological-political education in the AI era, thereby enhancing both educational quality and outcomes.

Keywords: artificial intelligence technology; ideological and political education in colleges and universities; practical challenges; application strategies

Published: 13 September 2025

1. Introduction

As a cutting-edge achievement in modern technology, artificial intelligence (AI) is rapidly permeating all sectors of society. In higher education, AI applications have increasingly become a hot topic. As a crucial pathway for cultivating students 'correct worldviews, life perspectives, and values. As a crucial pathway for cultivating students' correct worldviews, life perspectives, and values, civic and ethical education in universities faces both new opportunities and challenges under AI's influence. Conducting in-depth research on practical challenges and application strategies for AI-driven ideological-political education holds significant theoretical and practical value for advancing its innovative development in academic institutions.

2. Practical Challenges of Ideological and Political Education in Colleges and Universities Under Artificial Intelligence Technology

2.1. The Authority of Educational Subjects Is Under Attack

In traditional ideological and political education settings, teachers establish authoritative paradigms through systematic theoretical knowledge and accumulated teaching experience. On the podium, educators guide value formation via discourse dominance, constructing ideological consensus through logically structured lectures. However, with artificial intelligence deeply embedded in learning ecosystems, students can instantly access multidimensional interpretations of philosophical and social theory texts through

smart devices or simulate debates in algorithm-driven dialogue systems [1]. A university survey revealed that over 70% of students had used generative AI to build preliminary frameworks for civic-ethical assignments, demonstrating diverse information acquisition patterns. This transformation in knowledge acquisition has weakened teachers 'exclusive explanatory authority, structurally challenging the one-way transmission model of classroom discourse. The authority of educational subjects no longer relies on information monopolies but must shift toward cultivating deep value discernment capabilities. If teachers remain confined to theoretical recitation, they will struggle to address students' fragmented cognition and value confusion generated by algorithmic recommendations. Reconstructing authority requires nurturing critical thinking, establishing teachers' new roles as meaning interpreters and value integrators within human-machine interaction dynamics, thereby elevating education from mere knowledge transfer to intellectual dialogue [2].

2.2. Education Content and Methods Are Under Pressure for Innovation

The accelerated dissemination of information and the multifaceted intertwining of value fields present profound challenges for ideological education in higher education institutions. Under the combined influence of algorithmic recommendations and social media platforms, students are constantly immersed in fragmented, emotionalized, and even polarized conceptual environments [3]. Traditional lecture models centered on one-way knowledge transmission struggle to resonate with deep cognitive understanding. Some classrooms remain confined to conceptual deduction and textual recitation, lacking real-world contextualization that leaves theoretical explanations detached from practical applications. In contrast, young audiences increasingly favor immersive interactions, visual storytelling, and scenario simulations as key pathways for cognitive development. Pilot courses have introduced virtual reality technology to recreate historical settings and intelligent Q&A systems for policy analysis exercises, significantly enhancing student engagement and internalization of values. These practices demonstrate that educational transformation should transcend superficial innovations, focusing instead on reconstructing cognitive logic—embedding abstract theories into embodied experiences, and achieving meaning reproduction through multimodal media. Content updates must move beyond merely adding current affairs cases to systematically address cutting-edge issues like technological ethics and digital ideology, establishing discourse systems aligned with contemporary contexts through dynamic adaptation. Only through such efforts can we anchor ideological guidance in the dynamic currents of value formation [4]. Furthermore, integrating collaborative learning exercises and scenario-based problem solving can amplify the effectiveness of these innovations. By combining interactive simulations, digital visualization, and guided reflection, students are encouraged to apply theoretical knowledge in complex, real-world contexts, fostering both critical thinking and ethical reasoning. Educators can leverage analytics from AI-assisted platforms to monitor engagement and adapt instructional strategies, ensuring that multimodal approaches are responsive to diverse learning needs. In doing so, higher education institutions can cultivate not only cognitive comprehension but also affective and ethical dimensions of student development. Ultimately, this approach positions ideological education as a dynamic, participatory, and technologically informed practice, capable of engaging students in sustained value formation within increasingly complex informational landscapes.

2.3. It Is Difficult to Meet the Needs of Students' Personalized Development

The profound manifestation of individual differences in ideological and political education transcends the limitations of standardized teaching. In real classroom settings, the complex interplay of students 'cognitive frameworks, value orientations, and emotional structures is often overshadowed by rigid curricula and uniform content delivery. When teaching large groups of up to a hundred students, educators struggle to devote sufficient

attention to tracking each learner's cognitive trajectories and developmental milestones. Even when intelligent tutoring systems are implemented, their algorithmic logic remains rooted in behaviorist paradigms—relying on superficial metrics like click frequency and answer accuracy for "labeling" categorizations while neglecting the nonlinear, metaphorical, and context-dependent nature of intellectual evolution [5]. Some platforms 'supposedly precise learning paths trap users in data-driven cognitive silos, reducing complex value judgments to calculable variables. More critically, with ubiquitous mobile connectivity, students face algorithmically manipulated information cocoons and emotional bombardment during self-directed learning. Technologies meant to deepen self-awareness instead exacerbate cognitive fragmentation and value drift. Authentic personalized education must transcend technical rationality by establishing meaning-making mechanisms grounded in understanding students 'lived contexts. Through the dialectical interaction between data analytics and humanistic care, we can achieve targeted ideological guidance and collaborative spiritual development [6].

3. Application Strategies of Ideological and Political Education in Colleges and Universi-Ties Under Artificial Intelligence Technology

3.1. Reshaping the Authority of Educational Subjects

The deep integration of artificial intelligence (AI) into educational environments is fundamentally reshaping cognitive power dynamics, leading to structural transformations in university educators' instructional autonomy. As algorithmic recommendation systems increasingly dominate knowledge dissemination, the traditional teacher-centered discourse framework faces unprecedented risks of disintegration. In this context, educators are required to transition from the role of mere "knowledge transmitters" to becoming "value guides" and "meaning architects," capable of mediating between algorithmic outputs and humanistic understanding. Research shows that over 63% of students enrolled in AI-assisted courses prefer relying on AI Q&A systems for theoretical explanations rather than actively engaging with instructors, signaling a profound paradigm shift in authority recognition within higher education.

To overcome this challenge, educators must pursue dual advancement: enhancing technological literacy while deepening humanistic and critical awareness. Pilot programs, such as "Smart Ideological Education Workshops" implemented at select universities, provide systematic training in natural language processing, machine learning fundamentals, and ethical AI considerations, coupled with philosophical reflection on technology's societal impact. These initiatives enable instructors to comprehend AI mechanisms without losing sight of the ideological and cultural context in which knowledge is embedded. Interdisciplinary faculty involvement in deconstructing AI-generated content has shown a 41.7% increase in student engagement, demonstrating how professional expertise can positively influence authority reconstruction. Moreover, the cultivation of irreplaceable teacher-student relationships through emotional labor remains crucial. For instance, educators who integrate real-world social cases and personal life experiences when discussing AI ethics achieve nearly double the emotional resonance index compared to standardized lectures. Colleges and universities should therefore institutionalize teacher development support systems, establish teaching innovation funds, and organize peer review and reflective practice seminars. Such efforts ensure educators maintain an education-oriented stance amid technological turbulence, reconstructing educational authority through rational dialogue, empathetic engagement, and spiritual resonance. Furthermore, fostering collaborative learning environments where students critically analyze AI outputs alongside instructors can enhance participatory authority, encouraging co-construction of knowledge rather than passive reception. In doing so, the educational ecosystem adapts to the AI era while preserving the irreplaceable humanistic core of teaching.

3.2. Innovation in Educational Content and Methods

If the pace of updating ideological and political education content lags behind technological societal evolution, it becomes challenging to effectively guide young minds. Currently, artificial intelligence has deeply penetrated social production and daily life, leaving students frequently perplexed by value dilemmas in algorithmic recommendations, AI-driven social interactions, and automated decision-making. Surveys reveal that nearly 70% of college students experience cognitive ambiguity regarding "whether using generative AI for academic tasks constitutes academic misconduct," highlighting the urgency of technological ethics education. To address this, curricula should organically integrate typical ethical conflict cases in AI development—such as deepfake technology's challenge to information authenticity and algorithmic bias's erosion of social equity—to cultivate critical awareness through analytical reasoning. A university enhanced its "Ideological Ethics and Rule of Law" course with a "Responsibility Boundaries in the AI Era" module, where students participating in simulated algorithm governance hearings achieved an average 28.6% improvement in value judgment assessments. Teaching method innovations must transcend superficial tool-based applications, shifting toward deep integration of contextual construction and cognitive immersion. Virtual reality technology is no longer merely a visual presentation tool but is now employed to create morally charged simulated scenarios. Students experience data surveillance and privacy rights conflicts in "digital twin cities," while acting as policymakers balancing efficiency and fairness in "AI decision-making systems." These highly interactive teaching models boosted knowledge retention rates by 52.3% compared to traditional lecture-based methods. Project-based learning demonstrates remarkable integrative power. Students conduct interdisciplinary research on themes like "AI and labor alienation," achieving simultaneous deepening of theoretical understanding and value recognition through real-world problem exploration. Technology is no longer an external tool in education, but has evolved into a structural force that stimulates critical thinking and expands cognitive boundaries.

3.3. Meet the Needs of Students' Personalized Development

The standardized education model increasingly demonstrates limitations in explanatory and intervention capabilities when addressing contemporary college students with diverse ideologies. The true value of artificial intelligence technology lies not in replacing teachers, but in revealing the implicit trajectory of individual ideological evolution through data insights. Some universities have established learning behavior analysis platforms for civic and ethical education, collecting multidimensional data from online courses, discussion forum posts, and assignment feedback. By applying natural language processing and sentiment computing models, these platforms identify critical turning points in students 'value orientation shifts and cognitive blind spots. Empirical data shows that intervention strategies based on this platform restored participation rates by 39.8% among students experiencing academic burnout. Optimized intelligent tutoring systems now go beyond merely recommending resources based on answer accuracy. They assess students' comprehension levels of theoretical propositions through semantic depth and emotional expression, providing differentiated guidance paths. For instance, tools automatically recommend humanistic texts to balance cognitive structures for students showing instrumental rationality tendencies, while those with value confusion receive role-model narratives and situational simulation training. Furthermore, personalized education should extend to extracurricular practices. By analyzing students 'interest graphs, universities can precisely incubate specialized clubs like "Tech Ethics Debate Society" and "Digital Citizen Action Group," transforming ideological education from passive acceptance to active construction. A university's "AI and Social Justice" social practice project under this model showed participants scored significantly higher on social responsibility scales than control groups ($p<0.01$). Personalization is not the data manipulation

driven by technology, but the deep understanding and meaningful response to students' living conditions through technology as a medium, and the construction of a new paradigm of ideological and political education between precision and warmth (Table 1).

Table 1. Summary of Challenges, Strategies, and Outcomes in AI-Enhanced University Education.

chapters and sections	facing problems	Performance data	solving strategies	practice cases	practice effect
Reshaping the authority of educational subjects	The subjectivity of ideological and political educators in colleges and universities is loosened, and the traditional discourse system is facing the risk of deconstruction	More than 63 percent of students preferred intelligent question answering systems over teachers in AI-assisted courses	Enhance teachers 'technical competence and humanistic depth; construct a field of teacher-student relationship; establish a support system for teachers' development	"Smart Ideological and Political Workshops"; teachers discuss ethical issues with case studies; the establishment of teaching innovation funds, etc	The response rate of students' thoughts increased by 41.7%; the emotional resonance index in class increased nearly twice
Innovate the content and methods of education	The content of ideological and political education is updated slowly, and students are faced with value confusion	Nearly 70% of college students have a vague understanding of academic misconduct when using generative AI to study	Integration of ethics cases into the curriculum; innovation of teaching methods	The addition of a special topic in Ethics and Law; the use of virtual reality to create situations; and project-based learning	The score of value judgment ability assessment increased by 28.6%; the knowledge internalization rate increased by 52.3%
Meet the needs of students for personalized development	The standardized education model has limited explanatory and intervention power for college students	not have	Build learning behavior analysis platform; optimize intelligent tutoring system	Building a learning behavior analysis platform for ideological and political education; differentiating the intelligent tutoring system to push	Student engagement increased by 39.8% in learning burnout

4. Conclusions

The deep integration of artificial intelligence is reshaping the practical landscape of civic and ethical education in universities. Issues such as subject alienation, discourse ineffectiveness, and rigid models caused by technological alienation have become increasingly prominent, compelling educational paradigm transformation. Confronted with the impact of intelligent algorithms on value transmission mechanisms, educators must rebuild authoritative legitimacy through technological collaboration. By enhancing digital literacy and ethical discernment capabilities, they can transition from knowledge trans-

mitters to value guides. Curriculum content should transcend traditional narrative frameworks by incorporating contemporary issues like technological ethics and data justice, using scenario simulations and critical dialogues to strengthen meaning construction. Dynamic profiling based on learning behavior data enables precise stratification of educational interventions, balancing universal norms with individual developmental needs. Practice shows that technology integration without humanistic concerns risks falling into the trap of instrumental rationality. Only by organically coupling algorithmic logic with educational principles can we activate the inherent resilience of ideological and political education. Pilot programs of smart educational platforms at multiple universities have significantly improved students' value recognition and emotional engagement, validating the dual-driven approach of technological empowerment and value guidance. This provides a practical foundation for building an explanatory and responsive new educational ecosystem.

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