

Research on the Path of Digitally Empowering the Connotative Development of Ideological and Political Courses in Colleges and Universities

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Abstract: With the deepening of education digitization strategies and the rapid advancement of generative artificial intelligence, college ideological and political courses—which play a central role in fulfilling the fundamental mission of moral education—are now confronted with both significant opportunities and challenges for qualitative growth. This study employs a literature review approach to systematically examine the current era, the value significance, and the practical difficulties faced by digitally empowered ideological and political courses. Furthermore, it proposes practical strategies for enhancing their connotative development through three key dimensions: innovating teaching concepts, building a robust resource system, and strengthening teachers' capabilities. The findings aim to offer both theoretical insights and practical guidance for the reform and innovation of ideological and political education in the contemporary context.

Keywords: digital empowerment; ideological and political courses in colleges and universities; connotative development; generative artificial intelligence; teaching innovation

1. Introduction

The rapid advancement of next-generation information technologies, particularly generative artificial intelligence, has made the digital transformation of education a prominent trend in global educational reform. Generative AI, with its strong capabilities in content creation and interactive engagement, offers unprecedented technical support for innovating teaching scenarios, optimizing educational resources, and facilitating personalized learning in ideological and political courses. Currently, driven both by the worldwide wave of educational digitization and China's strategy for educational modernization, the integration of generative AI with ideological and political courses has emerged as a central feature of the evolving educational ecosystem. Nevertheless, this technological empowerment also introduces practical challenges, including diluted teaching focus, emotional distance between educators and students, and limited digital literacy among teachers. Accordingly, investigating effective approaches to digitally enhance the connotative development of ideological and political courses holds substantial theoretical importance and practical value, providing essential guidance for contemporary reforms and innovations in this field.

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2. The Era Situation of Digitally Empowering the Connotative Development of Ideological and Political Courses in Colleges and Universities

2.1. The Action Requirements of the Education Digitization Strategy

Amid the ongoing global scientific and technological revolution and industrial transformation, emerging digital intelligence technologies, particularly generative artificial intelligence, are driving significant reforms in education worldwide. In August 2024, UNESCO released two key guidelines: the "Framework for Teachers' Artificial Intelligence Competence" and the "Framework for Students' Artificial Intelligence Competence," which clearly outline the knowledge, skills, and values that teachers and students should possess in the AI era [1]. Earlier, in 2022, OpenAI introduced ChatGPT, a new generation of AI applications, marking generative AI as a major force in the current wave of technological and industrial transformation [2]. China, at the forefront of digital technology development, regards education as a critical component of modernization and actively promotes the integration of AI with educational practices. In March 2024, the Ministry of Education launched the "Demonstration Action for Large Model AI Application," highlighting "AI + higher education" as a key initiative. Clearly, digitalization is infusing new energy into ideological and political education in colleges and universities. It represents not only an essential step toward modernizing China's education system but also a necessary direction for the digital transformation of education.

2.2. The Two-Way Drive of Technological Innovation and Ideological and Political Teaching Reform

Amid the global surge in AI technology development and the intensifying international competition, generative artificial intelligence, as a leading-edge innovation, is profoundly reshaping society. In response, many countries have introduced strategies for digital development in education, creating new pathways for educational progress through digitalization. In the context of advancing Chinese-style modernization, integrating digital technologies into contemporary education has become an inevitable trajectory, making the digital transformation of ideological and political courses a timely necessity for promoting educational modernization. This transformation compels ideological and political courses to adapt to numerous changes driven by technological innovation. Unlike traditional courses, which often suffer from monotonous and dull content, modern ideological and political education can leverage big data to deliver engaging lessons through dynamic formats such as micro-videos, images, audio, and numerical data. This approach enables real-time sharing, rapid dissemination, and more intelligent, efficient, and convenient teaching, ensuring that education aligns better with the demands of the modern era.

2.3. The Internal Demands of the Connotative Development of Ideological and Political Courses

Connotative development focuses on substantially enhancing both the quality and effectiveness of ideological and political courses. In the context of the digital transformation of such education, leveraging digital technologies and Internet-based thinking to convey socialist core values can offer more efficient and higher-quality educational support for colleges and universities. Digitalization addresses the limitations of traditional ideological and political courses, such as monotonous content, fragmented resources, and limited teaching formats. By providing personalized, multidimensional digital resources and materials, combined with the seamless integration of online and offline teaching methods, it fosters innovation in instructional approaches and ensures robust support for students' holistic and autonomous development. Therefore, embracing digital teaching concepts and advancing the digital innovation of ideological and political education is essential to effectively engage and inspire students in the new era.

3. The Value Implication of Digitally Empowering the Connotative Development of Ideological and Political Courses in Colleges and Universities

3.1. Innovative Teaching Concept

Ideological and political courses constitute a fundamental component of the curriculum in colleges and universities. With the technical capabilities of generative artificial intelligence, such as advanced data processing and automated content generation, the traditional teaching model of these courses is undergoing a profound transformation.

Refreshing teaching concepts: Educators in ideological and political courses must continually modernize their teaching philosophy to meet the demands of the digital era. By leveraging digital technologies, teachers can better understand students' learning habits, cognitive patterns, and preferences, while comprehensively gathering and analyzing basic student information to tailor instructional strategies.

Redesigning instructional structure: The advent of the digital era has shifted teaching away from a purely teacher-centered model toward a more integrated "teacher-machine-student" framework. This evolution supports the transition from traditional online-offline blended learning to fully digital and intelligent classroom environments, enhancing both engagement and efficiency.

Building immersive learning scenarios: Artificial intelligence can be applied to construct interactive, immersive learning experiences. According to relevant guidelines, it is essential to employ new media and technologies to revitalize teaching, integrate the strengths of traditional ideological and political education with modern information technology, and increase both relevance and appeal [3]. Through such approaches, ideological and political instruction can move beyond passive "indoctrination," embracing experiential and participatory methods that make theoretical learning more engaging and impactful.

3.2. Enrich the Teaching Content

Ideological and political educators can leverage digital technologies to track students' learning duration, study pathways, and resource usage, enabling them to accurately analyze various data points and create detailed "individual profiles" based on students' cognitive levels, learning preferences, interests, and specialized skills.

Enhancing instructional design: Generative artificial intelligence, with its powerful data collection, analysis, and processing capabilities, supports teachers in identifying topics that resonate with contemporary college students. It allows educators to promptly capture students' learning needs and feedback, thereby facilitating more informed and targeted lesson planning.

Curating relevant materials: By employing intelligent tools such as algorithmic recommendation and correlation analysis, teachers can identify students' interests, integrate current domestic and international news and trending events, filter relevant data, and deliver precisely tailored learning materials to students.

Leveraging online resources: Utilizing network platforms' search functionalities, educators can provide resources that align with students' individual needs, learning trajectories, conceptual difficulties, and career aspirations. This approach not only enhances students' autonomy in selecting learning materials but also promotes collaborative learning and problem-solving skills.

3.3. Expand the Teaching Field

By leveraging generative artificial intelligence, educators can construct teaching environments that blend virtual and physical realities. Digital technologies disrupt the conventional framework of ideological and political instruction, reconstructing both traditional classroom spaces and virtual environments, allowing teaching to transcend temporal and spatial limitations and significantly expand the effective field of ideological and political education.

Designing immersive learning scenarios: Teachers can employ virtual reality (VR) and augmented reality (AR) technologies to create engaging and immersive teaching contexts. This approach overcomes the spatial constraints of traditional classrooms, integrates theoretical content with real-world experiences, and enhances students' sense of presence and identification with the material.

Utilizing cultural and historical resources: Emerging digital tools, including AI, VR, and holographic projection, enable teachers to maximize the educational potential of archives and historical sites. Students can gain a vivid and nuanced understanding of historical events and figures, fostering a rich, immersive learning environment.

Innovating instructional methods: Educators should effectively harness new media platforms to guide students in producing micro-videos, short films, and other visual narratives. Abstract concepts can thus be concretized through multimodal storytelling that combines text, images, audio, and other formats. Such innovations in teaching methods not only enhance learning effectiveness but also encourage students to shift from passive recipients to active participants in the educational process.

4. The Realistic Dilemma of Digitally Empowering the Connotative Development of Ideological and Political Courses in Colleges and Universities

4.1. Weakening the Focus of Teaching Content

Some ideological and political educators focus excessively on innovating digital teaching formats while neglecting the cultivation of values. On one side, digital teaching methods are rapidly evolving, including live streaming, online discussions, interactive platforms, flipped classrooms, and other diverse instructional approaches. These innovations have injected significant energy into the development of ideological and political curricula, creating a blended model of online and offline learning. On the other side, the guidance of values and ideological depth often remains insufficient. In pursuing novel teaching formats enabled by digital technologies, some teachers may overlook the cultivation of students' moral qualities, behavioral norms, and value orientation. As a result, the content of ideological and political courses can become overly entertaining or fragmented. The absence of real-time, in-depth discussions further limits critical thinking and diminishes the ideological and theoretical rigor of the courses to some extent.

4.2. Emotional Alienation between Teachers and Students

Digital technologies have significantly transformed the teaching of ideological and political courses, yet they have also contributed to students' overreliance on digital platforms, weakening emotional connections between teachers and students.

Emotional distancing between teachers and students: In digitally empowered colleges and universities, the shift from traditional face-to-face dialogue to digital teaching often makes interactions more virtual and impersonal. Students frequently lack motivation for active participation and in-depth discussion, leading to reduced teacher-student engagement. This diminishes the capacity of ideological and political educators to emotionally inspire and connect with students.

Diminished student agency: With the rapid advancement of digital tools, teachers increasingly employ micro-courses, MOOCs, and online resource libraries to provide multi-interactive, fast, and personalized learning experiences. However, the limited integration between online and offline teaching, coupled with reduced teacher-student interaction, makes it challenging for educators to identify students' cognitive gaps and value-related uncertainties. Consequently, students may complete tasks passively, focusing on superficial engagement rather than actively exploring the cultural significance and moral implications underlying the theoretical content.

4.3. Teachers' Digital Literacy Is Insufficient

The digital empowerment of ideological and political courses demands that teachers acquire new skills and knowledge.

Challenges from limited digital literacy: Some educators, lacking proficiency in information technology, continue to rely on traditional teaching methods. Their reluctance to embrace advanced pedagogical concepts can directly undermine the effectiveness and quality of digitally enhanced ideological and political instruction.

Overreliance on technology: Conversely, some teachers place excessive confidence in digital tools, treating them as a “universal solution” for improving course efficiency. They may focus primarily on the visual appeal and interactive features of virtual simulations or AR/VR technologies, reducing the complex educational process to a mere accumulation of technical elements without adequately considering the broader educational mission or students' actual learning needs.

Impact on teacher authority and student engagement: Meanwhile, students increasingly rely on social media platforms such as WeChat, Weibo, and TikTok for autonomous learning and skill acquisition. This trend can weaken teachers' authoritative presence and diminish students' emotional connection to both the educators and the ideological and political content.

5. Optimization Path of Digitally Empowering the Connotative Development of Ideological and Political Courses in Colleges and Universities

5.1. Innovate Teaching Concept: Stick to the Unity of Ideology and Innovation

The digital transformation of ideological and political courses should leverage the strengths of digital technologies to innovate instructional methods while preserving the ideological essence of the curriculum.

Deepening resource utilization: Educators should employ big data, cloud computing, artificial intelligence, and other digital tools to extract valuable insights and exemplary cases from Marxist classics, aggregating them into rich digital learning materials. Ideological and political teaching should move beyond mere theoretical exposition, closely integrating with practical life experiences. By incorporating contemporary cases and detailed data, courses can become more engaging and relevant to students' daily contexts.

Constructing integrated virtual and physical learning environments: Digitalization should expand the scope of ideological and political teaching, enriching both content and instructional formats. Technologies such as AR, VR, and MR can be applied to create immersive learning scenarios, allowing students to engage in deep learning within an environment that merges virtual and real elements. This approach enhances student participation and revitalizes the overall teaching experience.

Building interactive learning platforms: A comprehensive online learning platform should be established, incorporating tools such as official accounts, “Learning Power,” live streaming, and online discussion forums to increase teacher-student interaction and enrich discussion depth. By utilizing a variety of digital tools, the platform can make ideological education more vivid and visual, helping students internalize core values through intuitive experiences. Furthermore, AI-based personalized learning assistants can provide intelligent guidance, offer real-time feedback, and answer students' questions, supporting more effective and tailored learning.

5.2. Building a Resource System: Achieving High-Quality and Precise Supply

By systematically analyzing data throughout the learning process—such as tracking students' engagement and performance—teachers can gain precise insights into learning behaviors, design personalized instructional plans, and deliver targeted teaching.

Establishing a scientific evaluation system: Intelligent evaluation technologies, combined with big data analytics, can monitor students' learning continuously. By analyzing metrics such as online study time, classroom participation, and assessment results, educators can dynamically assess learning outcomes and generate comprehensive, data-driven evaluations of instructional effectiveness.

Developing a smart dynamic management system: Utilizing AI algorithms, educators can collect and examine data on students' academic performance, personal interests, mental health, and social practice. This enables predictions of behavioral trends, ideological needs, and cognitive patterns, helping teachers identify students' areas of confusion and design more focused and relevant teaching content.

Creating diverse digital teaching resources: Digital resources encompass not only multimedia materials such as videos, audio recordings, and courseware, but also policy documents, research findings, and case studies. By harnessing the precise delivery capabilities of digital technologies, educators can push resources that effectively support students' ideological development and value formation, making teaching more accurate, personalized, and impactful.

5.3. Improve Teachers' Ability: Build a 'Digital Literacy + Theoretical Literacy' Double Excellent Team

It is essential to accurately recognize the value of connotative development in digitally empowered ideological and political courses, acknowledge the transformative impact of digital technologies on teaching, clarify the professional positioning of ideological and political educators, and continuously enhance teachers' digital literacy.

Consolidating theoretical foundations: Teachers should consistently reinforce their understanding of Marxist theory through practical teaching activities, strengthen theoretical competence, and effectively integrate advanced digital teaching tools into lesson planning, case analysis, and other instructional processes to elevate the quality of digital teaching.

Enhancing teacher training: Teacher development is shifting from traditional offline, centralized models toward a combination of platform-based learning, blended training, and scenario-based practice. Educators should leverage platforms such as the national smart education public service system, smart classroom teaching modules, and skills workshops, while incorporating demonstration courses and virtual teaching cases into regular professional development programs.

Introducing digital human teachers: Digital human teachers—virtual instructor representations created using generative AI combined with technologies like virtual simulation, 5G, and XR—facilitate the "teacher-machine-student" instructional framework. Educators must not only acquire the technical knowledge to utilize digital teachers effectively and analyze student learning data for precise instruction, but also continuously enhance the intelligence and emotional expressiveness of digital instructors. This ensures that digital teachers can reason, convey emotions, and serve as effective assistants for real educators in addressing student questions and clarifying concepts.

6. Summary

Digitally enhancing the connotative development of ideological and political courses in colleges and universities represents both an essential trend of the times and a key avenue for curriculum reform and innovation. In advancing digital empowerment, it is crucial not only to embrace technological advancements but also to maintain a clear theoretical perspective, recognizing that the core of ideological and political education lies in reasoning, rather than succumbing to the misconception of "technology as all-powerful." By integrating the instrumental capabilities of digital technologies with the value-oriented

principles of ideological and political education, it is possible to achieve meaningful connotative development and provide robust support for the construction of a strong, modern education system.

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