

## *Original Paper*

# AI-Empowered Curriculum-Based Political and Ideological Education: A Case Study of the Digital Media Program Cluster at Shenzhen Polytechnic University

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### ***Abstract***

*Against the backdrop of the AI technology wave and the nation's intensified efforts to advance curriculum-based political and ideological education, exploring AI-empowered innovations in education and teaching has become a crucial topic. This paper takes the Digital Media Program Cluster at Shenzhen Polytechnic University as a case study, focusing on how to deeply integrate AI technology into the teaching practice of curriculum-based political and ideological education to address real-world challenges in traditional models, such as rigid incorporation of ideological and political elements, monotonous teaching methods, and outdated evaluation approaches. The paper constructs a trinity AI-empowerment pathway encompassing "content reconstruction—teaching innovation—evaluation optimization." Through analyzing specific application cases of technologies such as generative AI, virtual simulation, and learning analytics in uncovering ideological and political resources, creating immersive scenarios, and enabling process-based evaluations, it demonstrates the significant advantages of AI technology in enhancing the appeal, impact, and effectiveness of ideological and political education. The study aims to provide a replicable "Shenzhen Polytechnic University Model" and practical blueprint for curriculum-based political and ideological education in the era of intelligence, applicable to vocational colleges as well as new liberal arts and new engineering program clusters.*

### ***Keywords***

*Artificial Intelligence (AI), Curriculum-Based Political and Ideological Education, Digital Media, Vocational Education, Teaching Reform, Shenzhen Polytechnic University*

## 1. Introduction

Currently, we are living in a great era where technological innovation drives societal progress. Represented by artificial intelligence, big data, quantum information, and other cutting-edge technologies, a new round of technological revolution and industrial transformation is advancing rapidly, profoundly reshaping production and lifestyle patterns as well as social governance models, and exerting a far-reaching impact on the global competitive landscape and the trajectory of human civilization. Faced with this historic opportunity and challenge, the Party Central Committee, with foresight and strategic acumen, has placed the digitalization of education at a strategic height to support and lead the modernization of education and the building of a strong education nation, comprehensively implementing the national strategic initiative for the digitalization of education. This initiative aims to construct a ubiquitous, intelligent, and open new educational ecosystem, providing strong impetus for accelerating the development of a high-quality education system and delivering education that satisfies the people.

Against this expansive backdrop, fulfilling the fundamental task of fostering virtue and nurturing talents necessitates keeping pace with the times and innovating work methods and platforms. In recent years, the state has made systematic and holistic deployments regarding the construction of curriculum-based political and ideological education in universities, explicitly demanding the deep integration of value shaping, knowledge transmission, and ability cultivation to achieve comprehensive, whole-process, and all-round education. Meanwhile, as a crucial component of the national education system and human resource development, vocational education shoulders the important responsibilities of cultivating diverse talents, transmitting technical skills, and promoting employment and entrepreneurship. Its development has received unprecedented attention. Therefore, it is particularly urgent to facilitate the implementation, quality enhancement, and efficiency improvement of curriculum-based political and ideological education in the field of vocational education, especially in emerging majors such as digital media that are closely linked with cutting-edge technologies.

However, in practice, there are still pressing challenges to be addressed in the political and ideological education of digital media majors in some institutions. A prominent issue is the tendency towards "forced integration" and "superficiality," where the integration of ideological and political elements with professional teaching content lacks natural fluidity and fails to achieve seamless harmony. Educational methods sometimes devolve into mere formalities, limited to simplistic labeling or rigid didacticism, failing to genuinely touch students' hearts or elicit intellectual resonance. This not only undermines the effectiveness of education but also struggles to meet the higher demands of the new era for cultivating high-quality technical and skilled talents who are morally upright and well-rounded. Therefore, it holds significant practical importance and far-reaching strategic value to delve into how to leverage cutting-edge technologies such as artificial intelligence to precisely, skillfully, and profoundly integrate ideological and political education into every aspect of digital media professional teaching, overcome the aforementioned challenges, and enhance the pertinence, effectiveness, and appeal of

education. This is not only an inevitable requirement for promoting the connotative development of curriculum-based political and ideological education but also an inherent part of the reform and innovation of vocational education in the new era.

## 2. Core Concepts and Theoretical Foundations

Although "curriculum-based political and ideological education" is an educational concept with Chinese characteristics, the international academic community has accumulated substantial achievements in three related fields: technology-enabled education, moral education, and general education models. Firstly, in the field of technology-enabled education, often referred to as "educational technology," research focuses on how information technology reshapes teaching environments and learning models. From early E-Learning to mobile learning and learning analytics, and more recently to AI-driven adaptive learning systems and intelligent teaching agents, international scholars have generally explored the positive role of technology in enhancing teaching efficiency and enabling personalized learning, with a core paradigm centered on instrumental rationality and efficiency orientation. Secondly, in the realm of moral education and values cultivation, research is often embedded within frameworks such as "character education," "civic education," or "holistic education." Western scholars emphasize exploring how to subtly integrate mainstream societal values and moral cognition into students' learning experiences and campus culture through hidden curricula, service learning, and academic ethical norms, with a focus on practicality and contextualization. Finally, in the domain of general education models, classic approaches introduced by institutions like Harvard University and through initiatives such as the Bologna Process aim to cultivate students' critical thinking, social responsibility, and global perspectives through interdisciplinary knowledge integration, sharing similarities with the connotation of "value shaping."

Overall, international research provides important methodological insights into technology application and values education for this project. However, due to differences in social systems and educational objectives, there is a lack of direct theoretical references for systematically and purposefully serving specific ideological and political education goals with technological tools.

Domestic research is directly relevant to this project and exhibits a clear evolutionary trajectory, which can be summarized as the parallel development and initial convergence of three major themes. Firstly, theoretical and practical research on curriculum-based political and ideological education has progressed from conceptual elucidation to in-depth exploration. Early studies focused on demonstrating the synergistic relationship between "curriculum-based political and ideological education" and "ideological and political courses," explaining its intrinsic logic of "fostering virtue and nurturing talents." Subsequently, research shifted to the practical level, extensively discussing principles, pathways, and carriers for ideological and political elements across various disciplines and majors, while beginning to focus on innovations in teaching methods, emphasizing a transition from "forced integration" to "skillful fusion." Secondly, research on the application of artificial intelligence in

education is flourishing. Initially, such research focused on AI technology's supportive role as an auxiliary tool in teaching management, resource delivery, and personalized exercises. With technological advancements, the research frontier has extended to deeper applications, such as AI-created immersive learning environments, intelligent teaching decision support, and enabling process-based educational evaluations. Thirdly, research on the intersection of artificial intelligence and curriculum-based political and ideological education has emerged as a new hotspot. Some scholars have theoretically advocated for leveraging AI technology to innovate ideological and political education models or preliminarily explored the application potential of big data and virtual reality technologies in specific themes like red culture education and national conditions education.

However, a critical review of existing literature reveals a significant gap. Most integrated research remains at the macro-level advocacy of concepts or the introduction of general technology platforms, lacking systematic empirical studies targeting specific types of institutions, particularly vocational education, at the meso-level of professional clusters. Vocational colleges have unique characteristics in terms of talent cultivation goals, professional settings, and student learning situations, with "professional clusters" being a core feature of modern vocational education systems. Existing research has not adequately addressed how AI technology can deeply and organically integrate with the curriculum systems of professional clusters like digital media, which are characterized by rapid technological iteration, strong practicality, and significant value-laden content. Specifically, questions regarding implementation pathways, effectiveness evaluation, and unique challenges remain unanswered. Therefore, this study selects the Digital Media Program Cluster at Shenzhen Polytechnic University as a case study, aiming to fill this research gap through rigorous empirical analysis and provide insights for the refined and specialized development of AI-empowered curriculum-based political and ideological education theory and practice in the vocational education sector.

Any in-depth educational reform practice must be built on a solid theoretical foundation. This study aims to explore innovative pathways for AI technology to empower curriculum-based political and ideological education, with its logical starting point and validity argumentation primarily supported by the following three theoretical frameworks.

### *2.1 Constructivist Learning Theory*

Constructivist learning theory serves as the core theoretical cornerstone of this study. Transcending traditional views of knowledge transmission, this theory posits that knowledge is not passively received but actively constructed by learners through interactions with specific contexts. Its essence lies in viewing learning as a social, contextualized process of meaning construction, emphasizing the learner's initiative, social interaction, and the pivotal role of authentic contexts. Placing this theoretical perspective within the context of this study, its guiding significance becomes particularly prominent. AI technologies, especially virtual simulation, generative AI, and immersive interactive media, possess powerful capabilities for creating contexts, enabling the construction of highly simulated project practice fields for digital media students (e.g., virtual red culture memorial halls, simulated design

projects with social responsibility themes). In such technology-enhanced learning environments, students cease to be passive recipients of value knowledge; instead, through addressing authentic, complex professional tasks, they actively internalize ideological and political elements such as professional ethics, patriotism, and cultural confidence into their personal cognitive structures and value judgments through collaboration, inquiry, and reflection. Therefore, constructivist theory provides a profound theoretical basis for "why" and "how" to achieve endogenous values shaping through AI-created contexts.

### *2.2 Technology Acceptance Model*

The Technology Acceptance Model (TAM) offers an important analytical tool for examining key influencing factors in the practical implementation of AI-empowered curriculum-based political and ideological education reforms. The model posits that the adoption of a new technology by users is primarily influenced by two core variables: perceived usefulness and perceived ease of use. Perceived usefulness concerns whether users believe the technology can enhance their work performance or learning outcomes; perceived ease of use relates to the convenience of using the technology. In the context of this study, introducing AI technology as an innovative teaching tool into curriculum-based political and ideological education, its ultimate effectiveness depends not only on the technology's inherent sophistication but more critically on whether teachers are "willing and able to use" it and whether students "enjoy and benefit from" it. Applying the TAM framework allows for a systematic analysis of various factors influencing the acceptance of AI-based ideological and political teaching tools by professional course teachers and students, such as the fit between the tool and teaching content (usefulness), the friendliness of the operational interface and accessibility of technical support (ease of use), and subjective norms (e.g., school policy encouragement, peer demonstration effects). This theoretical perspective alerts us to the necessity of attending to the humanistic and social dimensions of technology integration in educational settings, providing forward-looking guidance for ensuring the implementability and sustainability of reform initiatives.

### *2.3 Collaborative Education Theory*

Collaborative education theory lays the theoretical foundation for this study to construct a multi-stakeholder educational community from a systems theory perspective. This theory posits that education is a complex 系统工程 (systematic project) that relies on breaking down barriers and forming synergies among various internal and external stakeholders to achieve optimal resource allocation and functional complementarity. In traditional educational models, professional course teachers, ideological and political educators (e.g., counselors, Marxist college faculty), and industry mentors often operate in isolation. The introduction of AI technology provides a new connecting link and technological platform to address this challenge. For instance, AI-based learning analytics systems can quantitatively present students' behavioral and emotional attitude data during project-based learning, offering objective bases for professional course teachers to implement precise value guidance and for ideological and political educators to deeply intervene. Industry mentors can remotely

participate in project evaluations through cloud platforms, integrating vivid industry ethics and professional norms into the teaching process in real-time. AI technology acts as a "connector" and "enabler," promoting efficient collaboration among different educational stakeholders through data sharing, process reengineering, and cross-temporal-spatial collaboration, thereby constructing a coherent, functionally complementary, and smoothly operating "grand ideological and political education" ecosystem.

### **3. Internal Logic and Feasibility Analysis of AI-Empowered Ideological and Political Education in Curricula**

The integration of artificial intelligence (AI) into ideological and political education in curricula is not a mere superposition of technology and education but stems from profound internal logic aimed at addressing the core challenges in traditional ideological and political education models. Its necessity primarily manifests in the fundamental transformation demands across three dimensions: content construction, method innovation, and evaluation paradigms.

#### *3.1 Content Dimension: From Static to Dynamic Generation and Precise Supply*

Traditional educational resources for ideological and political education in curricula often present as relatively static and rigid material repositories, with update speeds failing to keep pace with the rapid evolution of current affairs and industry practices. This can lead to a disjointed and lagging integration of ideological and political elements with professional teaching. AI technology, particularly natural language processing and big data analytics, enables real-time capture, intelligent screening, and in-depth mining of vast amounts of current affairs information, industry reports, and classic cases. It dynamically identifies, integrates, and supplies vivid ideological and political elements highly relevant to professional teaching content. For instance, when explaining digital media copyright technology, AI can instantly link to the latest intellectual property protection cases and regulatory updates, transforming ideological and political education content from "textbook-style" narration to "news-style" embedding. This shift achieves a transition from static supply to dynamic generation and precise matching, significantly enhancing the timeliness and relatability of ideological and political education.

#### *3.2 Method Dimension: From One-Way Indoctrination to Immersive Contextualization and Interactive Experience*

Traditional ideological and political education methods rely to a certain extent on one-way theoretical indoctrination by teachers, with students' learning processes heavily focused on passive reception and lacking in emotional resonance and in-depth experience. AI technologies, such as virtual reality (VR), augmented reality (AR), and generative AI (AIGC), possess powerful capabilities for context creation and interactive simulation. They can transform abstract values, grand historical narratives, or complex ethical dilemmas into perceivable and interactive immersive virtual contexts. For example, VR technology can allow students to "immerse" themselves in the scenes of major historical events, or

AIGC can generate interactive plots simulating real ethical dilemmas, guiding students through decision-making experiences. This methodological shift moves ideological and political education from "theoretical preaching based on hearsay" to "embodied experiences through personal involvement," greatly stimulating students' learning agency and promoting the internalization and identification of values.

#### Evaluation Dimension: From Vague Outcomes to Process-Oriented and Data-Driven Assessment

The effectiveness evaluation of traditional ideological and political education often relies on summative methods such as final-term papers and subjective feedback reports, making it difficult to objectively and accurately assess the complex, implicit, and long-term process of value formation. AI-supported learning analytics technologies offer a solution to this challenge. By analyzing students' behavioral data (such as discussion participation, decision-making paths, and virtual practice performance), textual sentiment data, and multimodal interaction data within AI-created learning contexts, AI can enable process-oriented and data-driven collection and analysis of students' value cognition and emotional attitude evolution. This evaluation paradigm shifts from focusing on vague and lagging "outcomes" to gaining insights into clear and immediate "processes," enabling teachers to promptly identify issues and provide personalized interventions. This transformation realizes a paradigm shift in ideological and political education evaluation from subjective empirical judgment to data-driven and precise feedback, providing a scientific basis for teaching optimization.

With the deep integration and rapid iteration of digital creative industries and new-generation information technologies such as AI, the cultivation of animation professionals in higher vocational colleges faces urgent requirements for transformation and upgrading towards practicalization, technological integration, and cross-disciplinary innovation. The Digital Media Program Cluster at Shenzhen Polytechnic University has identified two prominent issues in its current professional development through long-term teaching practices: First, there is a structural contradiction of "imbalance between breadth and depth" in the curriculum system, leading to insufficient adaptability of teachers and students to the real needs of the industry. Second, traditional course content lags behind industry technological advancements, making it difficult to match cutting-edge technological application scenarios such as AIGC, thereby constraining the generation and output of high-level teaching achievements.

In terms of curriculum system and resource construction, the program cluster has established an integrated teaching mechanism centered on the transformation from "assignments to works." By introducing a comprehensive project-based teaching model, it systematically promotes curriculum system reconstruction and embeds enterprise real-project modules into professional courses through the "Digital Animation Full-Process Production Training Platform" co-constructed with CCTV Animation Group. The annual summer school comprehensive practice sessions effectively facilitate students in integrating scattered course assignments into animation works with complete narrative and technical realization capabilities. Simultaneously, it develops hierarchical and categorized course resources based

on job competencies, forming a three-dimensional resource system encompassing theoretical teaching, practical training, industry certification, and achievement promotion.

At the level of industry-education integration and achievement transformation, the program cluster focuses on establishing a value-enhancement pathway from "works to products." By establishing deep industry-education integration collaboration mechanisms with leading enterprises such as Fantawild, Global Digital Creation, CCTV Animation, and Perfect World Education, it transforms enterprise real-project processes, industry technical standards (such as camera language norms, rendering efficiency indicators, and delivery format requirements), and market adoption feedback into crucial bases for curriculum teaching and evaluation. Guided by dual instructors from both schools and enterprises, it constructs a closed-loop teaching chain of "project introduction-collaborative creation-standard alignment-market validation," shifting teaching effectiveness evaluation from subjective scoring to objective market standards and ensuring that student achievements possess practical application value and meet enterprise product-level requirements.

In terms of technological innovation and demonstration leadership, the program cluster continuously promotes an iterative upgrading pathway from "products to high-quality works." By dynamically aligning enterprise's latest technological needs with course content, it jointly conducts research and development and teaching transformation of cutting-edge technologies such as AIGC-assisted creation, motion capture, and virtual production with enterprises. Facing industry development trends, it forms a high-level integrated team of "teaching-research-competition," establishing a virtuous cycle mechanism of "research driving teaching, teaching feeding back into competitions, and competitions promoting transformation" to ensure the timely integration of cutting-edge technologies into classroom practices. On this basis, it forms a four-dimensional linked educational ecosystem of "technology research and development-course integration-competition refinement-achievement promotion," ultimately producing a series of high-quality animation works with industry influence and social recognition, such as "Shenzhen-Zhongshan Link" and "Boonie Bears," broadcast on CCTV.

Through systematic teaching reforms, the program cluster has achieved remarkable results: It has developed four national-level high-quality online open courses, two national vocational education planning textbooks for the "14th Five-Year Plan," 12 school-level golden courses, and over 10 supporting textbooks. Teachers and students have won over 40 awards in major domestic and international professional competitions. The employment rate of graduates has consistently remained above 98%, with approximately one-third working for leading digital creative enterprises such as Tencent and NetEase. Its external radiating effect is significant, with the nationally-led professional teaching resource library it heads registering 190,000 users, covering over 200 colleges and universities nationwide and more than 40 social institutions. Teachers and students have undertaken industry-funded projects with a cumulative funds received of over 7 million yuan. The original IP "Maodou and Coffee Beans" has garnered over 350 million views online, with multiple works broadcast on mainstream platforms such as CCTV. It has undertaken five national-level teacher



training projects, training over 200 key teachers from more than 30 colleges and universities. Its achievement model has been featured in a special report by China Education Daily and promoted at multiple national teaching conferences. On the international stage, the program cluster has taken the lead in formulating national standards in the field of animation production and received the "Standard Innovation Award." It has led the international standard mutual recognition of animation majors under the "Shenzhen Agreement" framework, promoting the export of professional standards and curriculum resources to countries such as Pakistan. Relevant achievements have been selected as innovative cases in vocational education by UNESCO and promoted to over 230 vocational education institutions in more than 150 countries worldwide.

#### **4. Practical Pathways and Case Studies of AI-Empowered Ideological and Political Education in the Digital Media Professional Cluster at Shenzhen Polytechnic University**

To further verify the feasibility and effectiveness of the deep integration of artificial intelligence (AI) technology and ideological and political education (IPE) in curricula, the author focuses on four core courses and conducts detailed case studies from four dimensions: content mining, scenario creation, process evaluation, and creative practice.

Pathway 1: AI-Empowered Mining of Ideological and Political Content and Resource Construction—A Case Study of the "3D Animation Design" Course

In traditional teaching of "3D Animation Design," the integration of ideological and political elements often relies on teachers' personal knowledge reserves and subjective mining, leading to issues such as outdated materials and artificial connections with professional content. To address this pain point, the professional cluster introduces AI text analysis and knowledge graph technologies, aiming to transform ideological and political resources from "static supply" to "dynamic generation."

The specific implementation process is as follows: First, the teaching team utilizes AI text mining tools to automatically scan, extract keywords, and identify themes from a vast array of excellent traditional Chinese cultural resources, including classical literature, myths and legends, and folk stories. Subsequently, by constructing a domain knowledge graph, the mined cultural elements (e.g., the pioneering spirit of "Pangu Creating the World" and the perseverance of "Jingwei Filling the Sea") are intelligently associated with the core elements of animation scriptwriting (e.g., character setting, plot conflict, and thematic intent). For instance, when students are conceptualizing a script, the system can automatically recommend mythological allusions or historical stories containing corresponding value connotations as a creative material library based on their preliminary story tone.

Practical effectiveness and value analysis: This approach significantly enriches the breadth and depth of IPE resources in the curriculum. Students are no longer passive recipients of predetermined IPE knowledge points but actively explore and discover the connection points between traditional culture and contemporary animation art expression with the aid of AI tools. In creating a 3D animated short film with the theme of "craftsmanship spirit," students, through the knowledge graph, drew inspiration

from stories such as "Lu Ban Inventing the Saw," successfully integrating the wisdom and focus of ancient craftsmen into the portrayal of modern animated characters, resulting in works that possess both distinct ethnic styles and contemporary flair. The innovation of this pathway lies in the fact that AI serves not only as a resource library but also as a "cognitive partner," promoting students' in-depth understanding and creative transformation of national cultural values, and achieving a transformation of IPE from "external implantation" to "endogenous emergence."

#### Pathway 2: AI-Empowered Creation of Ideological and Political Teaching Scenarios and Optimization of Experiences—A Case Study of the "Virtual Reality Technology Application" Course

For grand revolutionary historical themes such as the Long March spirit, traditional classroom lectures often fail to evoke deep emotional resonance among students. In the "Virtual Reality Technology Application" course, the professional cluster utilizes VR technology to develop an immersive experience project titled "Retracing the Long March," integrating technical practice with value experience.

The specific implementation process is as follows: The project requires students to participate not only as experiencers but also as developers. In the first stage, students use VR devices to immersively experience the initial teaching scenarios, feeling the arduous environments of key nodes such as "Seizing the Luding Bridge by Storm" and "Crossing Snowy Mountains and Grasslands." In the second stage, driven by course tasks, students apply the VR development technologies they have learned, such as 3D modeling and scene interaction programming, to optimize and upgrade the experience scenarios. For example, one student group focused on enhancing the visual realism and physical feedback of walking in "snowy mountain terrain," while another group aimed to strengthen the immersive sound effects and tense atmosphere during enemy aircraft bombings.

Practical effectiveness and value analysis: This "experience-optimization-re-experience" model transcends simple sensory stimulation in IPE. During the process of technical optimization, students must delve deeply into historical details and understand the revolutionary will and strategic wisdom in specific environments, thereby transforming their cognition of the revolutionary spirit from abstract symbols into concrete technical implementation logic and emotional resonance points. One student wrote in the project report, "To simulate the real dragging sensation of swamps, we repeatedly adjusted the physical parameters. This process made me truly appreciate the hardships and greatness of the Red Army soldiers with every step forward." This case demonstrates that AI/VR technology, by creating "embodied experience" scenarios, enables students to internalize the revolutionary spirit through active technical practice, achieving a deep integration of knowledge learning, skill training, and value shaping.

#### Pathway 3: AI-Empowered Management of the Learning Process and Evaluation of Value Guidance—A Case Study of the "Game Planning and Operation" Course

The evaluation of IPE in curricula has always been challenging, especially for the assessment of process-oriented values such as teamwork and professional ethics, which are often highly subjective. In

the course project practice of "Game Planning and Operation," we introduce AI emotional analysis tools to quantitatively analyze the online collaboration process of project teams, providing objective evidence for the evaluation of value guidance.

The specific implementation process is as follows: The teaching team utilizes an AI platform that supports natural language processing to anonymously collect and analyze students' discussion content and comment interactions on project collaboration platforms (e.g., Tencent Docs, GitHub). The AI model is trained to identify positive value dimensions reflected in the text, such as "teamwork" (e.g., frequent use of words like "we" and "discuss together"), "responsibility" (e.g., actively claiming tasks and promptly providing feedback), and "integrity and punctuality" (e.g., strict adherence to DDL commitments). The system generates visual analysis reports, presenting the collaboration emotion index and value behavior performance of each group at different stages of the project.

Practical effectiveness and value analysis: This data-based process evaluation provides teachers with insights beyond the final project deliverables. For example, a teacher found that although a group submitted a high-quality game planning proposal, the AI analysis report revealed persistent silence from certain members and uneven task distribution during internal discussions. Based on this, the teacher could provide targeted guidance, not only commenting on the proposal itself but also emphasizing the importance of teamwork, thereby grounding values education in practice. This method transforms IPE evaluation from relying on teachers' subjective observations and "vague impressions" to based on behavioral data and "precise profiling," achieving visualized and assessable educational effects and promoting a scientific transformation of the IPE evaluation system in curricula.

#### Pathway 4: Creative Ideological and Political Practice Assisted by AIGC—A Case Study of the "Digital Image Synthesis" Course

The rise of AIGC (Artificial Intelligence Generated Content) technology has brought revolutionary changes to artistic creation. In the "Digital Image Synthesis" course, we guide students to use AIGC as a tool to stimulate creativity and directly serve the creative expression of mainstream values.

The specific implementation process is as follows: When teaching the "Concept Design" module, the teacher sets grand themes such as "Science and Technology Strengthening the Nation," "Beautiful China," and "Rural Revitalization," requiring students to use AI painting tools like Midjourney and Stable Diffusion to rapidly generate a batch of visually striking concept images as a creative material library. Students need to screen, interpret, reorganize, and artistically reprocess these massive AI-generated images to ultimately synthesize digital image works with complete narratives. For instance, one student group, with the theme of "Science and Technology Strengthening the Nation," used AI to generate images of future space stations, deep-sea explorers, and quantum computers, then skillfully fused them with real urban landscapes and images of scientists through digital synthesis techniques, creating promotional posters full of a sense of the future and national pride.

Practical effectiveness and value analysis: This practice cleverly combines technological frontiers with IPE themes. AIGC tools lower the technical threshold for creative conception, allowing students to

transform abstract national development strategies into visual and tangible artistic images, greatly stimulating students' creative enthusiasm and patriotism. More importantly, throughout the entire process of "prompt engineering-image screening-artistic recreation," students need to continuously deepen their understanding of the thematic connotations to guide AI in generating images that meet requirements and achieve meaningful artistic sublimation. This is not merely a technical application but also a profound journey of values construction. It proves that AIGC can serve as an effective "catalyst," helping students transform their internal value identification into externalized and infectious innovative achievements.

## 5. Conclusion

This study centers on the cutting-edge topic of leveraging artificial intelligence (AI) to empower ideological and political education in curriculum, taking the Digital Media Professional Cluster at Shenzhen Polytechnic University as an empirical case to systematically explore the underlying logic and practical pathways of ideological and political education innovation driven by AI technology. The study reveals that AI technology is not merely a simple addition of tools; however, for academic fluency, we can rephrase it as) "a mere addition of tools." Instead, it profoundly transforms the traditional paradigm of ideological and political education by restructuring the provision of teaching content, creating immersive teaching scenarios, and enabling precise process evaluation, effectively addressing the dilemmas of "disconnection" and "superficiality." The case demonstrates that in technology-intensive professional clusters like Digital Media, constructing a deeply integrated model of "technology application - teaching innovation - value guidance" can significantly enhance educational outcomes. However, the reform also faces challenges in terms of technological ethics, teachers' digital literacy, and collaborative mechanisms. Looking ahead, it is essential to further delve into the study of the laws governing ideological and political education in the era of intelligence, and to establish a new ecosystem of education that is human-machine collaborative and data-driven, providing robust support for cultivating high-quality technical and skilled talents with both moral integrity and professional competence.

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