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The Value Advantages, Challenges, and Practical Pathways of Artificial Intelligence Empowering Ideological and Political Education for Adolescents

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Abstract

Artificial intelligence is being integrated into education with unprecedented depth, reshaping the concepts, content, methods, and evaluation of ideological and political education for adolescents. Based on current research, this paper outlines AI's key value in enriching educational resources, innovating teaching models, improving precision in moral cultivation, refining evaluation methods, and supporting the transformation of teachers' roles. It also analyzes major challenges, including ideological security risks, weakened educational subjectivity, data privacy and ethics, and limited technological competence. Accordingly, the paper proposes practical pathways such as strengthening value guidance, promoting human–machine collaboration, enhancing digital literacy, and improving institutional support, aiming to provide theoretical and practical guidance for integrating AI with ideological and political education in the new era.

Keywords

Artificial Intelligence, Ideological and Political Education for Adolescents, Educational Digitalization, Human-Machine Collaboration

1. Introduction

With breakthrough advances in artificial intelligence technologies such as big data, machine learning, natural language processing, and virtual reality, human society is rapidly entering the intelligent era. As a key application domain of AI, education is undergoing an irreversible process of digital transformation world-

wide. President Xi Jinping has emphasized that "educational digitalization represents a crucial breakthrough for opening new pathways and fostering new advantages in China's educational development" (Xi, 2023), providing clear guidance for the digital upgrading of education in the new era. The General Office of the State Council, in its Opinions on Deepening the Reform and Innovation of Ideological and Political Theory Courses in Schools in the New Era, calls for "promoting the application of modern information technologies such as artificial intelligence in the teaching of ideological and political theory courses" (General Office of the State Council, 2019).

Against this macro background, ideological and political education for adolescents is experiencing a profound paradigm shift—from experience-driven approaches to data-intelligent models, from one-way instruction to immersive interaction, and from uniform teaching to personalized moral cultivation. How to accurately grasp the value logic of AI-empowered ideological and political education, soberly recognize and effectively address its accompanying risks and challenges, and scientifically construct pathways for deep integration has become a key issue for enhancing the relevance, appeal, and effectiveness of ideological and political education in the new era.

This paper primarily employs methods of literature research and theoretical analysis, aiming to systematically review and elucidate the theoretical understanding and practical pathways of artificial intelligence empowering ideological and political education. The selection of literature is based on the following criteria: core sources include databases such as China National Knowledge Infrastructure (CNKI) and Web of Science, using combinations of keywords such as "artificial intelligence," "ideological and political education," "educational digitization," "algorithmic ethics," and their corresponding English terms. The timeframe focuses on publications spanning from 2018 to 2024. Emphasis is placed on including Chinese Social Sciences Citation Index (CSSCI) source journals, English Social Sciences Citation Index (SSCI) journal articles, research reports from authoritative institutions, and relevant national policy documents to ensure the academic rigor, timeliness, and policy relevance of the literature. Through summarizing, comparing, and synthesizing the selected literature, this paper seeks to construct a systematic analytical framework encompassing values, risks, and pathways.

2. Merits of Integration: The Multidimensional Efficacy of AI-Empowered Ideological and Political Education for Adolescents

Core Value and Ultimate Aim: AI-Driven Transformation towards Precision, Personalization, and Immersion in Ideological and Political Education.

2.1. Toward AI-Enabled Integration and Precision Provision of Educational Resources

Traditional ideological and political education resources are relatively fragmented

and updated with a lag, making it difficult to meet the diversified cognitive needs of students. Artificial intelligence, with its powerful capabilities in data mining and processing, can break through temporal and spatial constraints, enabling the intelligent convergence and dynamic updating of massive educational resources. By digitizing the relationships among people, events, and objects through AI, and as big data continuously generates, stores, circulates, and is shared in cyberspace, various social resource elements are integrated into specific platforms and fields, achieving the digitization and virtualization of the real world.

First, leveraging intelligent algorithms enables the extensive aggregation and cloud-based integration of cross-modal educational resources, fundamentally expanding the breadth and depth of teaching content. Through intelligent algorithms, cross-modal resources such as online open courses, academic literature, current affairs news, red-themed films and television works, and historical archives can be widely aggregated to construct a "macro ideological and political" education resource cloud platform, significantly broadening and deepening the scope of instructional material.

Second, natural language processing and knowledge graph technologies facilitate the semantic parsing and systematic reconstruction of vast resources, transforming discrete information into a multidimensional and systematic knowledge network for ideological and political education. These technologies allow for deep semantic understanding, knowledge association, and structured reorganization of resources, forming a coherent knowledge system. Utilizing generative artificial intelligence (AIGC), abstract content such as the basic principles of Marxism and Party and national history can be automatically converted into visually enriched, narrative-driven micro-lectures, short videos, or interactive dialogue materials, thereby "bringing theories to life" and enhancing their appeal to adolescents.

For instance, a study developed an intelligent question-answering system integrated with a Party history knowledge graph, which improved the accuracy of students' responses to questions regarding the causal relationships of complex historical events by approximately 25% and significantly enhanced their exploratory learning interest (Tian & Li, 2024).

Furthermore, relying on the creative transformation capability of generative AI, abstract theories are converted into concrete, narrative-based interactive content, truly achieving the creative transformation of ideological and political theory from "systematized knowledge" to "vivid cognition." This process of technological empowerment essentially accomplishes a triple leap: from resource accumulation, to knowledge construction, and finally to value dissemination.

2.2. Toward Immersive and Precision-Oriented Pedagogical Models

In traditional ideological and political teaching models, the instructional environment remains relatively closed, primarily conducted within fixed spaces with limited teaching resources and tools. This constrains the development of students'

creativity and initiative, while the lack of effective interaction and deep communication between teachers and students undermines both teaching effectiveness and educational efficacy. Artificial intelligence is now comprehensively reshaping the form of education, with technology reconstructing conventional teaching environments and thereby driving transformations in teaching behaviors and pedagogical models. Therefore, empowering ideological and political courses with AI—leveraging technology's unique mediating role in instruction—can enhance the relevance and appeal of such courses, ultimately improving their teaching outcomes and educational impact.

On the one hand, AI innovates the teaching methods of ideological and political courses by creating blended virtual-physical learning scenarios. Through technologies such as virtual reality (VR), augmented reality (AR), and digital twins, students can be "transported" into historical event sites, red education bases, or major social practice environments, providing an immersive "on-the-spot" experience. For instance, students can "personally experience" the hardships of the Long March via VR equipment or engage in dialogue with "historical figures" in AR scenarios. Such embodied learning approaches significantly strengthen the emotional resonance and persuasiveness of teaching, facilitating the effective transformation of knowledge into emotion and conviction. Empirical research indicates that following the "Retracing the Long March" VR experiential teaching activity, students in the experimental group showed a significant increase in their scores on the relevant historical values identification scale compared to the control group taught through traditional methods, along with a marked rise in emotional engagement indicators (Ma & Yang, 2025).

On the other hand, leveraging the powerful computational capabilities of AI platforms, teachers can accurately identify students' needs and provide ideological and political learning resources tailored to their disciplinary backgrounds and personal interests.

Personalized ideological and political education places high emphasis on students' cognitive levels and value orientations. Based on the analysis of big data generated by learning behaviors, AI can construct individualized student "digital profiles," precisely diagnosing their mastery of knowledge, cognitive characteristics, value tendencies, and emotional states. This enables a shift from "one-size-fits-all" instruction to "precision-targeted" educational delivery. Teachers can dynamically adjust teaching pace, content emphasis, and interaction strategies according to system-generated "one-student-one-plan" reports, implementing truly differentiated instruction tailored to each learner's needs.

For example, in one teaching practice, a learning analytics model was employed to provide students from different disciplinary backgrounds with personalized recommendations of ideological and political cases relevant to their respective fields. This approach led to targeted improvement in students' classroom performance and assignment quality within the dimension of "integrating theory with practice" (Wu, 2024).

2.3. Promoting the Process-Oriented Shift and Scientization of Teaching Evaluation

Traditional evaluation in ideological and political education primarily relies on summative assessments such as final written examinations or term papers, which often fail to comprehensively and objectively reflect the process of students' ideological internalization and value identification. The teaching evaluation system empowered by artificial intelligence is evolving toward a holistic, multidimensional, and intelligent direction.

AI enables process-oriented evaluation by comprehensively capturing teaching and learning data in ideological and political courses. Through technologies such as classroom audio-video analysis, online learning behavior tracking, automated assignment grading, and affective computing, real-time and continuous data can be collected on students' cognitive engagement, emotional involvement, and value-based discussions throughout the learning process. By fully capturing multidimensional data generated during students' learning—including online behavioral trajectories, assignment performance, viewpoints expressed in classroom interactions, and characteristics of their thinking logic—AI technology facilitates the construction of refined digital learner profiles. Leveraging intelligent speech analysis, natural language processing, and educational data mining, teachers can systematically track the dynamic evolution of students' ideological cognition, achieving precise learning diagnosis and personalized developmental guidance that covers the entire teaching cycle. This effectively stimulates the autonomous construction of students' higher-order thinking skills and fosters the deep development of critical cognitive literacy.

The powerful computational support and algorithmic systems of AI further promote a more comprehensive and scientific approach to teaching evaluation in ideological and political courses. By utilizing complete, process-wide, and all-encompassing student data traces, instructors can conduct comparative studies and correlation analysis to evaluate students' learning status from multiple dimensions, thereby obtaining important evidence for instructional improvement. Applying machine learning algorithms to analyze these multimodal data not only allows for a more comprehensive and objective assessment of learning outcomes but also sensitively identifies potential ideological confusion, emotional fluctuations, or value deviations among students, providing teachers with timely warnings and intervention basis. In related experimental teaching projects, natural language processing technology was employed to analyze student contributions in online discussion forums. This approach not only enabled the quantitative evaluation of discussion engagement and knowledge coverage but also facilitated the identification of potential ambiguities in students' value perceptions within their discourse. Consequently, it assisted instructors in providing targeted classroom guidance and feedback (Liu & Li, 2025). This evidence-based, data-driven evaluation makes teaching feedback more precise and instructional improvements more scientific, contributing to the formation of a virtuous cycle of "evaluation,

diagnosis, and refinement."

2.4. Facilitating the Digital Transformation of Teacher Roles and the Development of Professional Competence

Teachers are the core bearers of educational value, and artificial intelligence should always be positioned as an intelligent assistant that enhances teachers' capabilities and expands the dimensions of instruction, rather than as a substitute for the teacher's role. The ultimate goal of technological application is to strengthen the irreplaceable role of teachers in value guidance, emotional resonance, and intellectual inspiration, thereby improving educational effectiveness through human–machine collaboration. Far from diminishing the teacher's function, AI promotes the transformation of their role from a traditional knowledge transmitter to a designer of learning activities, a dialogue partner in value guidance, and a skilled navigator of technological application. Intelligent teaching assistant systems can undertake repetitive tasks such as material retrieval, exercise grading, and answering routine queries, freeing teachers from heavy mechanical labor and enabling them to focus more on high-level instructional design, in-depth interaction, and humanistic care (Cheng & Zhao, 2020).

Artificial intelligence provides strong support for teachers' professional development. Instructors of ideological and political courses must actively contemplate how teaching and learning in their field can be enhanced in quality and efficiency in the AI era, reconsider how they can achieve substantive self-development in the process of rebalancing the educational ecosystem, and innovatively reflect on the methods through which a new generation capable of undertaking the mission of national rejuvenation can be cultivated (Xu & Zheng, 2020). Teachers can leverage intelligent platforms for collaborative lesson preparation, observation of exemplary teaching cases, and personalized training tailored to their specific weaknesses, continuously improving their information-based teaching skills and AI literacy. Generative artificial intelligence can also serve as an "intellectual extension" for teachers, assisting in curriculum design, case development, and learning analytics, thereby inspiring pedagogical innovation.

3. Challenges: Examining the Risks of AI-Empowered Ideological and Political Education for Adolescents

3.1. Ideological Security and the Guidance of Mainstream Values Face Infiltration Risks

This constitutes the most central and severe challenge in applying artificial intelligence to ideological and political education. AI technology is not a value-neutral tool; its algorithmic logic and data foundation inherently carry the ideological inclinations of its developers and data sources. In the construction and application of smart teaching systems for university-level ideological and political courses, a lack of necessary value scrutiny and algorithmic oversight may allow embedded "intelligent logic" to harbor ideological biases. If this technological empowerment

is dominated by capital forces or specific interest groups, it could not only undermine the objectivity and scientific rigor of the teaching content but also risk being manipulated into a channel for ideological infiltration, thereby posing a systemic threat to the value formation of university students.

Firstly, AI algorithms themselves are not value-free. Their training data and model design may implicitly reflect the cultural backgrounds, value stances, and even ideological biases of their developers. When these algorithms are applied to generate, filter, and recommend content for ideological and political education, they may potentially propagate ideas inconsistent with the core socialist values of China, posing a "boiling frog" type of infiltration risk to the value formation of adolescents (Zhu & Tao, 2025). Secondly, the powerful content generation capability of generative AI could be exploited to produce and disseminate information promoting historical nihilism or erroneous social trends. The generated content can be deceptive, increasing the difficulty for adolescents to distinguish truth from falsehood and right from wrong. Furthermore, algorithmic recommendation mechanisms may exacerbate the "information cocoon" effect, confining adolescents within information environments that align with their existing preferences and thereby weakening the function of ideological and political education in guiding them to comprehensively and objectively understand society.

To directly address the aforementioned risks, a multi-layered defense mechanism must be established at the level of technological governance:

First, implement rigorous scrutiny of content sources and value embedding. At the input stage of intelligent teaching platforms, ensure the authority and political correctness of training data and resource libraries, while integrating core socialist values as key parameters into recommendation algorithms.

Second, establish a regular model and output auditing system. Conduct periodic sampling and manual verification of AI-generated or recommended ideological and political education content, with a focus on auditing the accuracy of historical narratives, theoretical explanations, and value judgments.

Third, activate mandatory manual review and intervention procedures when addressing sensitive topics such as major historical events and core concepts of political theory, to ensure the final output remains free from bias.

Fourth, introduce an "information diet" model in algorithm design. Intentionally incorporate a proportion of screened diverse perspectives and factual content within personalized recommendations, proactively breaking the "information cocoon" and guiding students to engage with a more comprehensive and balanced spectrum of information.

3.2. The Autonomy of Educational Subjects and Humanistic Care Face Risks of Erosion

In the process of deep integration between AI and ideological and political education, vigilance is required against the risk of eroding the subjectivity of education due to imbalanced technological application. Over-reliance on technology may

lead to an "absence of the human element" in the educational process. Some teachers, accustomed to traditional one-way indoctrination methods, may merely adapt AI-based smart teaching into a "smart" version of online one-way knowledge transmission, which still fails to mobilize the autonomy and enthusiasm of vocational college students.

The emotional experience of human-computer interaction still falls short compared to face-to-face teaching. Compared to offline interactive classroom learning models, treating AI technology merely as a tool to reduce the teaching workload—without holistic instructional design—can instead lead to a decline in students' subjective initiative and classroom concentration, resulting in suboptimal teaching outcomes. On one hand, if teachers become overly reliant on intelligent systems for lesson preparation, delivery, and even evaluation, their pedagogical leadership and value judgment may be weakened, reducing them to "appendages" of technology and compromising the requisite intellectual depth and theoretical rigor of ideological and political courses (He, 2021). On the other hand, for students, convenient access to information and automated Q&A may foster intellectual laziness, habituating them to accepting ready-made conclusions rather than engaging in deep thinking and independent judgment, leading to "cognitive outsourcing" and a weakening of critical thinking skills. Moreover, increased human-computer interaction may substitute for authentic, profound interpersonal interaction and emotional exchange, thereby diluting essential elements of ideological and political education such as emotional resonance, personal influence, and life, ultimately affecting the warmth and effectiveness of the educational endeavor.

3.3. Data Privacy Protection and Technical Ethics Face Severe Tests

In the era of information explosion and the AI revolution, data is the foundation of intelligence. Students' data is collected, stored, and used as the basis for teaching by AI educational systems. Blurring data boundaries, issues of data redundancy, and unclear identification of data subjects can all trigger data ethics risks. In the context of intelligent education, data subjects are often unclear about the types and methods of data collection by intelligent machines, leading to increasingly privacy boundaries and making individuals more "transparent" in society (Luo, Tan, & Zhong, 2023).

The deep application of AI is built upon the collection and analysis of massive datasets. In the process of integrating AI into university ideological and political teaching, it can "quietly" collect and analyze comprehensive data on teachers' and students' learning, lives, and behaviors. In the context of ideological and political education, the collected student data may include not only academic information like learning behaviors and grades but also highly sensitive personal information such as ideological trends, emotional states, social relationships, and even family backgrounds. Leakage or misuse of this data could seriously infringe upon student

privacy and might be exploited for commercial marketing or inappropriate social evaluation. Excessive data collection, data breaches, or misuse all pose risks to personal privacy rights. This can undermine teachers' and students' trust in intelligent teaching platforms, increase their psychological burden, and consequently affect their engagement with the courses.

Furthermore, AI algorithms often conceal a "technological black box." It is difficult for people to understand the specific logic behind the algorithms analyzing educational data, and the algorithms themselves struggle to explain their analytical methods to humans. This "algorithmic black box" leaves users—including teachers—in the dark about how personalized learning or teaching content is generated algorithmically. Teachers cannot ascertain whether decisions made based on these algorithms are correct, align with student needs, or might negatively impact student development. The opacity of algorithms (the "black box" problem) may lead to unfair or discriminatory evaluations, such as "labeling" students based on biased data models. How to enhance educational precision through data while strictly adhering to ethical norms, ensuring data security, algorithmic fairness, and process transparency, constitutes a major issue that must be resolved.

3.4. The Technological Literacy of Teachers and Students Faces a Reality Gap

While AI can free ideological and political theory teachers from some simple, repetitive, and administrative tasks, the dual-subject model of ideological and political education is gradually shifting towards a "tri-subject" model involving the "educator (teacher)-educatee (student)-artificial intelligence (e.g., intelligent tutor)." It is foreseeable that the pedagogical authority of teachers will be partially "usurped" by AI. With the rapid advancement of AI, the potential loss of the teacher's primary role in ideological and political education may even become a reality. Furthermore, different intelligent systems used in teaching often lack effective data sharing and integration, leading to the phenomenon of "data silos" where the intelligent value of big data collection, extraction, and integration cannot be fully realized.

Currently, many ideological and political teachers come from humanities and social science backgrounds and have limited understanding of the principles, applications, and potential of AI technology. This results in varying degrees of "technophobia" or a "technology-as-tool" mindset, making it difficult for them to organically integrate technology into the core aspects of teaching for deep fusion. Some teachers only use AI for demonstrations or simple interactions, failing to leverage its deeper value. Simultaneously, while students, as "digital natives," are familiar with technology operation, they generally lack a critical understanding of the limitations and potential risks of AI technology (such as judging information authenticity or identifying algorithmic bias), making them prone to blindly trusting or over-relying on technological output (Wu, 2025). The insufficient digital literacy on both sides is one of the key bottlenecks constraining the effectiveness

of AI empowerment.

4. Practical Pathways: Constructing a New Ecosystem of Human-Machine Collaborative Intelligent Ideological and Political Education

Confronted with the reality where both value and challenges coexist, it is imperative to adopt a prudent yet proactive approach, systematically planning the practical pathways for empowering adolescent ideological and political education with artificial intelligence, thereby constructing a new ecosystem characterized by technology as the means, education as the foundation, value guidance as the core, and human-machine collaboration as the mode.

4.1. Strengthen Value Guidance and Improve the Governance Framework for AI Educational Applications

Starting from the ideological nature and special positioning of university-level ideological and political courses, and returning to the essential requirement of teaching reasoning within them, it is necessary to deepen research into the "algorithmic structure" and "algorithmic logic" embedded in the process of integrating AI into this teaching. This will strengthen the guiding role of ideological discourse and value confidence regarding the "embedded" rules of the technology itself during the innovation process empowered by AI. A rigorous examination of the value rationality behind integrating AI technology into ideological and political teaching must be enhanced. This ensures that the input side of AI technology and products precisely supplies high-quality teaching resources, while the output side innovatively supports the achievement of teaching objectives.

Upholding the correct political direction and value orientation must be established as the primary principle and fundamental prerequisite for AI-empowered ideological and political education. First, enhance top-level design and institutional regulation. Education authorities should take the lead in formulating guiding principles, technical standards, and ethical guidelines for the application of AI in the field of ideological and political education, clearly delineating red lines and bottom lines for every stage, including data collection, algorithm design, content generation, and result application. Second, establish mechanisms for technical review and value calibration. A pre-emptive review mechanism for ideological security and value alignment should be established for AI products and services intended for use in ideological and political education, ensuring their algorithmic logic and output content comply with national mainstream ideological requirements. The exploration of systems such as "algorithm filing" and "value embedding" can be considered to prevent risks at the source. Third, improve the dissemination effectiveness of mainstream values. Actively utilize AI technology to innovate the methods for disseminating socialist core values, China's excellent traditional culture, and the history of the Party and the nation, producing more attractive and compelling digital products to enhance the "visibility" and influence

of mainstream values within the intelligent algorithmic environment.

4.2. Promote Human-Machine Collaboration and Reshape the Symbiotic Relationship among "Teacher-Student-Technology"

As a teaching practice combining ideological depth, theoretical rigor, affinity, and relevance, the ideological and political course takes humanity as both its starting point and ultimate goal. To return technology to its authentic role in teaching and reshape the internal criteria of teaching subjects, ideological and political teaching should embody the student-centered logic of talent cultivation. This involves reconstructing a collaborative and symbiotic relationship among the three subjects: teacher, student, and technology. By clarifying subject boundaries, innovating interaction mechanisms, and rebuilding value consensus, the dialectical unity between technological empowerment and the essence of education can be achieved (Wang, 2025).

Clarify the positioning of AI as "assistive" and "empowering," adhering to the principle of teacher-led and student-centered instruction. First, reinforce the leading role of teachers. Teachers should always remain the designers, organizers, and ultimately responsible agents for value guidance in ideological and political education. AI is a tool to expand teachers' capabilities and enhance teaching efficiency, not a replacement. Teachers need to improve their ability to harness technology, skillfully using it for learning diagnosis, resource integration, and personalized guidance while retaining final authority over teaching content review and the interpretation of value direction. Second, stimulate students' subjective initiative. Utilize AI to create open, inquiry-based, and reflective learning scenarios, guiding students to actively discover, analyze, and solve problems, engaging in deep learning and value construction with technological assistance, thereby avoiding passive information reception. Learning tasks that require higher-order thinking and human-machine collaboration should be designed to cultivate students' critical thinking and innovation capabilities. Third, optimize human-computer interaction design. The application of technology should serve to enhance, not diminish, teacher-student and student-student interaction. For example, intelligent systems can act as catalysts promoting classroom discussion and collaborative inquiry, rather than mere question-answering machines.

4.3. Enhance Digital Literacy and Fortify the Foundation for Effective Use of Intelligent Technology by Teachers and Students

Digital literacy is an essential competency for participants in ideological and political education in the AI era. Enhancing the ability of ideological and political teachers to harness, master, operate, and integrate AI technology is crucial for maximizing the empowering effect of AI on university-level ideological and political education.

First, schools should conduct systematic training focused on the essence of education. Through special lectures, seminars, and other formats, schools can invite

experts in ideological and political education and AI technology specialists to organize a series of activities themed around "AI and the Personalized Development of Ideological and Political Education." This helps teachers clearly understand the role of AI technology in their teaching. Simultaneously, teachers should be encouraged to participate in practical projects to promote innovation in teaching methods. Schools should follow the development trends of AI, strengthen exploration of AI projects, and improve teachers' ability to apply AI.

Second, the state should implement systematic professional training for ideological and political teachers. Education administrative departments can establish a comprehensive AI training system, coordinating and arranging systematic training courses. Professional training institutions or universities can be commissioned to develop AI training curricula specifically for ideological and political teachers. Incorporating AI literacy into national, provincial, and school-based teacher training programs is essential. The content should not only cover tool usage skills but also encompass the basic principles of AI, educational application scenarios, data ethics, risk identification, and prevention, helping teachers progress from "knowing how to use" to "using skillfully" and "using wisely" (Xue, 2025). Critical information literacy education should be integrated into students' ideological and political curricula. Through dedicated modules or integrated teaching content, students should be instructed on how to rationally view and critically use AI-generated information, identify algorithmic bias, guard against internet addiction and information cocoons, and cultivate responsible and ethical digital citizenship.

Finally, encourage practical exploration and community building. Support ideological and political teachers in conducting practical research and teaching competitions on the integration of AI and their subject, establishing inter-school and regional communities of practice for teachers to share successful cases and experiences, and jointly solve application challenges. Furthermore, through digital technology, intelligent platforms, and information integration, promote the connection between the "small" classroom of the campus and the "large" classroom of society. Transform venues such as memorial halls, museums, science and technology museums, exhibition halls, and cognitive centers into vivid teaching scenarios and rich teaching resources, constructing an open, shared, collaborative, innovative, and efficiently operating intelligent "Macro Ideological and Political Education" system.

4.4. Improving Institutional Safeguards to Promote the Steady and Long-Term Development of AI-Empowered Ideological and Political Education

The widespread application of AI technology has a dual nature. How to mitigate the ethical risks arising from its application in adolescent ideological and political education is an issue that requires special attention and urgent resolution. To reduce technological risks, adhere to the purpose and fundamental principles of practical education, ensure the value of educational and practical subjects, and establish robust mechanisms for subject responsibility, market regulation, and ter-

minal review.

A long-term mechanism is the guarantee for ensuring the sustained and healthy development of AI empowerment. First, improve data security and privacy protection systems. Relevant departments should guide data subjects to actively participate in the research and development of intelligent privacy technologies and the daily supervision of data, enhance their awareness of self-protection, and strengthen data protection efforts. Ideological and political teachers must strictly comply with laws and regulations such as the Personal Information Protection Law, clearly defining the boundaries of ownership, management rights, and usage rights of educational data. Technical and managerial measures such as data anonymization, encrypted storage, and access control should be adopted to effectively protect the privacy of students and teachers (Li, 2024). Second, establish a multi-stakeholder evaluation and supervision mechanism. To assess the effectiveness of AI applications in ideological and political education, an evaluation system involving multiple parties—including education experts, technology experts, teachers, students, and parents—should be established. Regular assessments and supervision should be conducted to promptly identify issues and make adjustments for optimization. Third, increase resource investment and incentives. Education administrative departments at all levels and schools should provide guarantees in terms of funding, equipment, and personnel. Teachers and teams achieving outstanding results in the innovative integration of AI and ideological and political education should be recognized and rewarded, fostering an atmosphere that encourages exploration and tolerates failure (Zhao, 2024). Through the joint efforts of multiple stakeholders, a comprehensive and scientific ideological and political education resource system can be constructed, providing solid support for ideological and political education.

5. Conclusion

The deep integration of artificial intelligence with ideological and political education for adolescents represents a profound educational transformation, whose ultimate goal is to serve the fundamental task of fostering virtue and cultivating talents. We must fully embrace the opportunities brought by technology, leveraging AI to address the pain points and challenges of traditional ideological and political education, thereby enhancing its contemporaneity, precision, and effectiveness. Simultaneously, we must maintain a clear awareness of potential risks, steadfastly uphold the educational essence and value foundation of nurturing individuals, and guard against the potential alienation and risks that technology may introduce. It must be clearly recognized that in value-oriented ideological and political education, the capabilities of artificial intelligence have distinct boundaries. First, there are limitations in emotion and value judgment: current affective computing technologies are unable to accurately and consistently infer students' complex, implicit emotional states or the depth of their value identification. Their analytical results can only serve as supplementary references and cannot replace the under-

standing gained by teachers through long-term observation and in-depth dialogue. Second, the risk of excessive personalization: over-reliance on algorithms for personalized content delivery may lead to a narrowing of students' knowledge structures and the fragmentation of value guidance, thereby undermining the common experiential foundation necessary for collective education and the shaping of mainstream values. Therefore, in areas such as the final arbitration of value guidance, the deep elicitation of emotional resonance, the dialectical analysis of complex ideological dynamics, and the capture and utilization of unexpected educational opportunities in teaching, the professional judgment, humanistic care, and educational wisdom of human teachers must remain decisive. The empowerment enabled by artificial intelligence should always be grounded within an ethical framework that prioritizes teacher leadership and upholds the holistic development of individuals as its ultimate goal.

Looking ahead, within the dialectical unity of "upholding fundamental principles while breaking new ground," we should persistently explore the reasonable boundaries and optimal pathways for technology-empowered education. The aim is to construct a new vision for ideological and political education centered on the all-round development of individuals, where technological intelligence and human wisdom illuminate each other, thereby contributing wisdom and strength to cultivation.

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The authors declare no conflicts of interest regarding the publication of this paper.

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