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Research on the Internal Logic and Practical Paths of Information Technology Empowering Ideological and Political Education Innovation

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Abstract: The integration of information technology and education is an irreversible trend. Against this background, information technology has endowed ideological and political (ideological and political) education with new momentum. Centering on this core proposition, this paper sorts out its development background and strategic significance, analyzes the internal logic from three dimensions: technology reconstructing the cognitive paradigm, optimizing educational elements, and recreating the education process, and proposes a practical path of "technology integration - scenario innovation - ecological co-construction". The research finds that information technology, by virtue of its own advantages, breaks through time and space limitations, enhances interactive experience, and realizes precise policy implementation, effectively resolving the dilemmas of traditional ideological and political education such as fragmented resources, single methods, and lagging evaluation. It provides technical support and theoretical innovation achievements for the high-quality development of ideological and political education in the new era.

Keywords: Information technology; Ideological and political education; Educational innovation; Technology empowerment; Educational ecology

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1. Introduction

In the current era, the global digital transformation is advancing at an unprecedented speed, and information technology has been fully and deeply integrated into the entire chain of education. According to the authoritative "China Education Informatization Development Report (2024)," the coverage rate of digital teaching resources for ideological and political courses in Chinese universities has reached 98.7%, which well demonstrates the remarkable achievements made in the digital construction of ideological and political courses in Chinese universities [1]. However, there are still a series of structural contradictions in the process of technology application.

2. Research background and significance

2.1. Driven by national strategic needs and possibilities provided by technological development

The strategically important document "China Education Modernization 2035" puts forward the important strategic task of "accelerating educational reform in the information age", requiring the construction of intelligent campuses and the coordinated construction of integrated intelligent teaching, management, and service platforms [2]. The construction of intelligent campuses and the creation of integrated platforms are crucial for promoting the comprehensive reform of education in the information age. The 2024 National Education Conference emphasized the need to "empower the high-quality development of education with digitalization", which clearly guided the innovation of ideological and political education [3]. In the tide of digitalization, ideological and political education should rely on various digital means and technologies to better meet the needs of the times and contribute to cultivating high-quality talents who meet the requirements of socialist construction. In the current period of rapid scientific and technological development, a series of emerging technologies, such as 5G, big data, artificial intelligence, and blockchain, have provided a relatively stable and strong technical foundation for changes in the field of education, bringing tremendous changes to ideological and political education. Ideological and political education has gradually transformed from the traditional "experience-driven" model to a more scientific and precise "data-driven" model [4].

2.2. Profound changes in educational forms and the urgent need to address practical dilemmas

Generation Z students are "digital natives", and their cognition, learning habits, and value orientations exhibit digital characteristics. Against this background, the traditional education model faces the problem of structural mismatch between the "supply side" and the "demand side" [5]. It is urgent to inject new vitality into education with technology, reconstruct the educational form to meet the learning needs of Generation Z students, and improve the quality and effectiveness of education.

In the current educational environment, ideological and political education is facing obvious "three difficulties" problems: first, accurately identifying students' ideological dynamics; second, effectively meeting students' personalized needs; third, comprehensively evaluating the effect of education. When evaluating the educational effect of ideological and political education, we should not only focus on the final result but also attach importance to the collection of process data [6].

3. Basic logic of information technology empowering ideological change

3.1. Technology reconstructs the cognitive paradigm: From experience judgment to data-driven decision-making

Big data technology has powerful functions and unique advantages, constructing a closed-loop system of "collection - analysis - prediction - intervention". Among them, data collection is the foundation, which extensively collects relevant information; then, in-depth analysis of the collected data is conducted to explore laws and potential problems; scientific predictions are made based on the analysis results to anticipate possible situations; finally, timely interventions are carried out according to the prediction results, forming an organic whole.

3.2. Technology optimizes educational elements: From fragmented resources to systematic integration

Blockchain technology uses its own advantages to build a decentralized educational trust mechanism, enabling educational data trust to be established in a distributed network. It can realize cross-institutional data sharing and value circulation, allowing data from different educational institutions to be exchanged and circulated in a safe and trusted environment, promoting the optimal allocation of educational resources and the efficient transmission of educational value.

3.3. Technology recreates the education process: From one-way indoctrination to two-way interaction

Virtual Reality (VR) and Augmented Reality (AR) technologies have their own unique advantages. They have successfully broken through the many limitations formed by traditional physical spaces and created an immersive learning scenario specifically for the field of education. The "meta-universe ideological and political classroom" presents a unique charm [7]. Students can conduct a comprehensive and detailed analysis of poverty alleviation results with the help of data visualization tools.

3.4. Technology empowers evaluation reform: From result-oriented evaluation to process tracking

The in-depth integration of Internet of Things (IoT) technology and advanced sensor equipment can systematically complete the detailed recording and data collection of the entire educational process. This technological integration can not only accurately capture students' learning status and behavioral data inside and outside the classroom but also fully track every key link of teaching activities, thereby building a comprehensive and multi-dimensional educational information database.

4. Exploring the integration paths of information technology and ideological and political education

4.1. Build intelligent educational infrastructure and integrate technology

In the process of educational development, hardware upgrading is crucial. To meet the needs of teaching in the new era, it is necessary to build new teaching terminals, such as 5G + holographic projection classrooms, AI-assisted teaching robots, and wearable emotion monitoring devices, which will bring new experiences and changes to teaching [8]. 5G + holographic projection classrooms can create an immersive teaching environment for students by leveraging the high-speed and stable characteristics of 5G; AI-assisted teaching robots have intelligent interaction functions that can help students master knowledge more effectively. To meet the needs of teaching and students' growth, there are software such as intelligent teaching systems, ideological and political resource platforms, and learning analysis tools. These software have unique functions and different roles: intelligent teaching systems help realize the intelligence of teaching, optimize processes, and improve effects; ideological and political resource platforms integrate ideological and political education resources to provide support; learning analysis tools accurately analyze students' learning status and provide targeted suggestions for teachers and students. To record students' growth trajectories and in-depth analysis of their development status, a student growth database can be established. This database integrates various key data, recording students' basic information such as identity, admission time, and major from enrolment to graduation; it includes learning

records, presenting the learning achievements, progress, and performance of each course; it also integrates practical experience data, reflecting students' participation in social practice, community activities, and other practical situations.

4.2. Create immersive educational experiences and innovate scenarios

Actively develop innovative and educational virtual simulation scenarios, such as VR Party history education, AR red culture experience, and MR social governance simulation scenarios [9]. Use VR technology to create realistic Party history education scenarios, allowing participants to experience the development context and great achievements of the Party history; use AR technology to build a vivid red culture experience environment, enabling people to intuitively appreciate its profound connotations through the integration of virtual and real. At the same time, actively build diverse mobile interactive scenarios such as WeChat mini-programs, ideological and political APPs, and short video platforms to provide learners with more convenient, efficient, and rich learning channels [10]. Give full play to the advantages of mobile learning platforms, and use the rich ideological and political content in short videos to convey knowledge and concepts to learners in a vivid and intuitive form. In addition, in social practice scenarios, blockchain technology has many significant characteristics, such as decentralization, immutability, and traceability, which can provide a safe, reliable, and highly transparent recording platform for these practical activities [11]. In the current digital era, blockchain technology can be fully used to record a variety of practical activities, such as volunteer services and social surveys.

4.3. Form a synergistic education force and co-construct an ecosystem

To promote the high-quality development of ideological and political education, we actively set out to establish an ideological and political education alliance chain. After the construction of such an alliance chain, corresponding goals can be effectively achieved in terms of curriculum sharing, teacher exchange, and credit recognition [12]. The initiative of curriculum sharing allows students from different schools to access more diverse and distinctive ideological and political course content, thereby broadening their knowledge horizons. To promote the in-depth integration of ideological and political education with practical applications, we actively cooperate with enterprises to develop ideological and political education practice bases. Through close cooperation between the two parties, we fully tap the rich resources and experience in actual enterprise projects, carefully sort out and refine those typical and representative real projects, and turn them into vivid and educational teaching cases. Actively build an efficient digital platform for home-school communication, and realize the real-time sharing of students' growth data by using advanced digital technology means. Scientifically and reasonably push information such as students' specific performance in class (such as the enthusiasm of classroom participation and the level of knowledge mastery) and students' psychological status to parents.

4.4. Establish a sustainable development mechanism and provide an institutional guarantee

To better regulate the application of educational big data and ensure its safety and rationality in the use process. In terms of data collection, it is necessary to clearly stipulate the channels, methods, and scope through which data can be collected legally and compliantly, so as to prevent undesirable situations such as excessive data collection and abuse [13]. In terms of data use, it is also clarified that data should follow what kind of processes and be used for what reasonable purposes, so as to ensure that the use of data is completely in line with legality and compliance. To improve the quality of education, meet the needs of the digital era, and promote the digital

transformation of education and teaching, relevant departments should implement a project to improve teachers' digital literacy. When implementing this project, the focus is on building a three-level system of "provincial training bases - university workshops - personal learning spaces". To effectively promote the positive progress of universities in technology application and improve the actual effect of technology in the field of education, the effect of technology application is included in the university assessment index system [14]. This encourages universities to attach more importance to the application of technology in teaching, scientific research, and other aspects, and promotes them to continuously explore and innovate new models and methods of technology application.

5. Conclusion

This paper explains the in-depth logic of information technology empowering ideological and political education. Information technology reshapes the educational data flow, knowledge flow, and interpersonal flow, promoting the efficient, fair, and sustainable development of the educational system. In educational practice, the path of "technology integration - scenario innovation - ecological co-construction" has achieved remarkable results. However, when advancing this path, we need to be alert to the risks brought by technological alienation [15]. With the gradual arrival of the Web3.0 era, emerging technologies such as the meta-universe and digital twins will more deeply reshape the educational form. Against this background, ideological and political education must continuously innovate, actively meet new challenges, and keenly and accurately seize new opportunities [16], ensuring that ideological and political education can always keep up with the pace of the times, thereby playing a key role in cultivating all-round developed high-quality talents.

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References

[1] Educational Management Information Center of the Ministry of Education, 2024, China Education Informatization Development Report (2024). Educational Management Information Center of the Ministry of Education, Beijing.

[2] Meng X, 2025, Analysis of the Motivation, Risks and Paths of the Transformation of University Ideological and Political Education Empowered by Digital Intelligence. Today's Mass Media, 33(09): 147–152.

[3] Fu YY, 2024, The Technical Logic, Value Implication and Practical Paths of Artificial Intelligence Empowering University Ideological and Political Education. Journal of Hubei University of Education, 41(07): 14–19.

[4] Wang S, 2025, The Form, Advantages and Approaches of the Digital Transformation of Ideological and Political Education Research Methods. Heilongjiang Researches on Higher Education, 43(12): 107–113.

[5] Qi DX, Huang YC, 2025, Digital Intelligence Technology Empowering University Ideological and Political

Education: Reality·Should-Be·Future. Heilongjiang Researches on Higher Education, (04): 14.

[6] South China University of Technology, 2024, Ideological and Political Education Big Data Analysis Report (2024). Big Data and Artificial Intelligence Research Institute of South China University of Technology, Beijing.

[7] Li JK, Wang Y, 2025, Achievements, Limitations and Prospects: A Review of Research on Meta-Universe Empowering Ideological and Political Education. Journal of Kunming University of Science and Technology (Social Sciences Edition), (02): 152.

[8] Xiao H, Tang WX, 2025, 5G Technology Empowering the Innovation of University Ideological and Political Education Models. Youth of the Times, (23): 40–42.

[9] Li N, 2025, Generative Artificial Intelligence Empowering Ideological and Political Education: Evolution Mechanism, Potential Risks and Prevention. Journal of Ningbo Institute of Education, 27(01): 67–72.

[10] Sun QS, 2025, Requirements and Paths for the Content Construction of University Ideological and Political Education Empowered by Artificial Intelligence. Future and Development, 49(06): 97–102.

[11] Chen HS, Zou TL, 2025, Development Opportunities, Ethical Risks and Resolution Strategies of Intelligent Technology Empowering University Ideological and Political Education Evaluation. Journal of Inner Mongolia Normal University (Educational Science Edition), 38(01): 64–70.

[12] Department of Teacher Work of the Ministry of Education, 2024, National Survey Report On the Digital Literacy of Ideological and Political Teachers (2024). Department of Teacher Work of the Ministry of Education, Beijing.

[13] Li WJ, Chen Y, Bai RR, 2025, Analysis of the Paths of Digital Technology Empowering University Ideological and Political Education. Journal of Liaoning University of Technology (Social Science Edition), 27(04): 72–76.

[14] Zheng R, Zhao YM, Qin XX, 2025, Value Implication, Problem Representation and Practical Logic of Digital Technology Empowering University Ideological and Political Education. Journal of Heilongjiang Institute of Technology, 39(01): 61–65.

[15] Yang C, 2025, How Can Artificial Intelligence Empower University Ideological and Political Education — A Review Of “Research on Artificial Intelligence Empowering University Ideological and Political Education”. Journal of the Chinese Society of Education, (01): 115.

[16] Liu SS, Zhang YK, 2025, A Review and Prospect of Research on Artificial Intelligence Empowering Ideological and Political Education. Journal of Nanning Vocational University, 33(04): 82–90.