

Opportunities, Challenges, and Responses to Ideological and Political Education in Universities in the Era of Artificial Intelligence

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Abstract: *With the continuous promotion of the digital education strategy, artificial intelligence is deeply integrated into the higher education system, promoting structural changes in ideological and political education in universities. As a key link in implementing the fundamental task of cultivating morality and talents, ideological and political education urgently needs to conform to the trend of intelligent development and achieve innovation in upholding integrity. This article mainly uses literature research and logical analysis methods to define relevant core concepts, and to sort out the integration logic and practical application status of artificial intelligence and ideological and political education in universities. Research has found that artificial intelligence has significant advantages in innovating teaching methods, implementing precise education, improving work efficiency, and perfecting evaluation mechanisms, which can effectively compensate for the shortcomings of traditional ideological and political education models that are rigid and weak in targeting. At the same time, issues such as excessive objectification of technology weakening humanistic warmth, algorithmic bias forming information cocoons, hidden risks in data security, and a shortage of composite teachers pose multiple challenges to ideological and political education work. In this regard, universities should adhere to the essence of education, optimize algorithm mechanisms, strengthen faculty construction, improve institutional guarantees, build a collaborative education system, and promote the healthy integration of technology and ideological and political education. This study aims to optimize the development path of intelligent ideological and political education, provide theoretical reference for the digital and high-quality development of ideological and political education in universities in the new era, and help cultivate high-quality young talents in the new era.*

Keywords: *artificial intelligence; ideological and political education in universities; precise education; digitalization of education*

1. Introduction

In the context of rapid iteration of digital technology, artificial intelligence technology with big data, generative artificial intelligence, and intelligent algorithms as its core has deeply penetrated various fields of society, promoting higher education to enter a new stage of intelligent and digital transformation. As a core course for implementing the fundamental task of cultivating moral character and shaping the correct values of young people, ideological and political education in universities shoulders the important mission of cultivating new talents for the country, and urgently needs to adapt to the wave of technological development to complete the reform of the education mode. Contemporary college students belong to the original group of the Internet. Their thinking mode, cognitive habits and information receiving logic are diversified and fragmented. The traditional ideological and political education model, which focuses on classroom teaching and is homogenous, has been difficult to adapt to the growth law of young people in the new era, and the effectiveness of education is facing bottlenecks.

The country attaches great importance to the deep integration of intelligent technology and ideological and political education, and has successively issued policy documents related to education digitization, clearly requiring the optimization of the ideological and political education system based on modern information technology, and promoting the innovation of ideological and political education. Artificial intelligence, with its technological advantages in data mining, intelligent analysis, and virtual interaction, can break through the temporal and spatial barriers of traditional ideological and political education, optimize the allocation of educational resources, achieve precise control over students' ideological dynamics, and provide a new opportunity to solve the problems of homogenization and

lagging in ideological and political education[1]. However, at the same time, technological empowerment comes with derivative risks such as algorithm cocoons, data breaches, cultural weakening, and false intelligence information, posing multiple challenges to the value judgment of college students, the ideological and political education environment, and the comprehensive ability of teachers.

Based on this, this article is based on the context of the development of artificial intelligence era, using literature research method and logical analysis method to sort out the internal integration logic of intelligent technology and ideological and political education in universities, and systematically analyze the development opportunities and practical difficulties faced by ideological and political education under the empowerment of technology. Based on the current development status of ideological and political education in universities, this study aims to explore a scientifically feasible optimization response path, with the goal of improving the intelligent ideological and political education system, balancing the attributes of technological tools and ideological and political humanities, promoting the high-quality development of ideological and political education in universities, and providing theoretical and practical references for universities to implement the fundamental task of cultivating morality and talents in the new era.

2. Overview of ideological and political education in universities in the era of artificial intelligence

2.1 Definition of core concepts

The artificial intelligence referred to in this article is a collection of technologies that rely on emerging technologies such as big data, algorithm models, cloud computing, etc., and have the ability to independently collect information, conduct intelligent analysis, simulate interaction, and make autonomous decisions. Different from general artificial intelligence at a broad level, this article focuses on weak artificial intelligence applied in higher education scenarios, mainly including intelligent recommendation algorithms, generative artificial intelligence, virtual simulation interaction, student data monitoring systems and other technical forms, with distinct characteristics of dataization, intelligence, interactivity and convenience. This type of technology takes data as the core carrier and can complete the screening, integration, and in-depth analysis of massive information, providing technical support for optimizing education and teaching.

Ideological and political education in universities is a core component of the higher education system, with the fundamental task of cultivating moral character and the core content of ideal and belief education. It provides ideological and moral education, political theory education, and value guidance for university students[2]. Its essence is a humanistic, guiding, and practical educational activity, which not only undertakes the function of spreading mainstream ideology and shaping students' correct values, but also plays a role in ideological guidance, psychological care, and moral cultivation. It is a key educational link for cultivating high-quality new people in the era and building a solid ideological foundation for young people for the country.

2.2 The integration logic of artificial intelligence and ideological and political education in universities

From a technical logic perspective, the data processing capabilities of artificial intelligence are suitable for the digital transformation needs of ideological and political education. Traditional ideological and political education has problems such as one-sided data collection and lagging information analysis, while artificial intelligence can quickly integrate multidimensional data such as student learning behavior, online browsing, classroom performance, etc., accurately mine the dynamic changes in students' thoughts, make up for the data shortcomings of traditional education models, and provide technical support for the scientific development of ideological and political education.

From the perspective of educational logic, the integration of the two is in line with the modern educational philosophy of teaching students according to their aptitude. There are significant individual differences in the growth environment, personality traits, and ideological cognition of contemporary college students, and homogeneous teaching is difficult to meet personalized educational needs. Artificial intelligence relies on algorithm modeling to construct students' personal portraits, which can accurately identify students' ideological confusion and learning needs, achieve differentiated content push and targeted education guidance, and effectively improve the accuracy of ideological and political education.

From the perspective of development logic, the integration of the two is an inevitable requirement of

the digital education strategy. The country continues to promote digital education reform and explicitly proposes to promote the deep integration of information technology and education and teaching. The intelligent transformation has become an inevitable trend for ideological and political education in universities to break through development bottlenecks and innovate educational models. Technological empowerment can promote the transformation of ideological and political education from traditional experiential education to scientific and modern education.

2.3 Current application status of artificial intelligence in ideological and political education in universities

Currently, major universities in China are gradually promoting the construction of intelligent ideological and political education. Artificial intelligence has been widely applied in various scenarios such as ideological and political classroom teaching, daily student management, and ideological dynamic monitoring[3]. At the teaching level, most universities rely on smart teaching platforms to carry out blended online and offline teaching, using virtual simulation technology to restore red historical scenes and create immersive ideological and political classrooms; Generative AI assists teachers in creating teaching courseware, optimizing teaching design, and enriching classroom teaching forms. At the management level, universities establish a student ideological monitoring platform to capture students' online comments, psychological states, and behavioral abnormalities in real time, achieving pre prevention and control of ideological risks.

However, from the overall development status, the integration of artificial intelligence and ideological and political education is still in the early exploration stage. On the one hand, some universities have incomplete construction of intelligent infrastructure, insufficient investment in technology, low penetration rate of intelligent devices, and difficulty in achieving all-round intelligent education; On the other hand, the problem of shallow application of technology is prominent, and most universities only use artificial intelligence as a teaching aid tool, without deeply integrating the essence of ideological and political education to optimize the education system. Core functions such as data mining and intelligent judgment have not been fully utilized. At the same time, some universities have problems such as uneven distribution of resources and homogenization of technology integration models. The personalized and characteristic intelligent ideological and political education model has not yet taken shape, and there is still significant room for improvement in overall education efficiency.

3. Opportunities and challenges of ideological and political education in universities in the era of artificial intelligence

The deep popularization of artificial intelligence technology has brought structural changes to the ideological and political education industry in universities. Technology combines both instrumental and dual nature, empowering innovative development of ideological and political education and addressing traditional pain points in education [4]. However, it also gives rise to multiple practical problems such as humanistic weakening and ideological risks. This chapter dialectically analyzes the development opportunities and practical challenges of ideological and political education in universities under the background of artificial intelligence, clarifies the advantages and disadvantages of current education work, and provides analytical basis for constructing scientific and perfect response strategies in the future.

3.1 Opportunities brought by artificial intelligence to ideological and political education in universities

3.1.1 Enrich the presentation forms of education and broaden the boundaries of ideological and political education dissemination

Traditional ideological and political education in universities often relies on offline classrooms for theoretical indoctrination, with rigid teaching forms and dull content, which makes it difficult to stimulate the learning initiative of contemporary college students. Artificial intelligence relies on technologies such as virtual simulation, digital modeling, and intelligent audio and video to reconstruct ideological and political teaching scenes. It can dynamically restore red historical events, replicate red cultural sites, and construct immersive and visual teaching scenes, breaking the limitations of time and space. At the same time, the intelligent teaching platform integrates massive digital resources such as red literature, ideological and political open courses, and current political information, and builds an open resource sharing library to make up for the shortcomings of traditional teaching resources being single and unevenly distributed geographically, achieving the normalization and fragmented penetration of

ideological and political education.

3.1.2 Accurately analyze ideological trends and achieve personalized and precise education

Traditional ideological and political education generally adopts a homogeneous teaching model, which makes it difficult to accurately capture individual ideological differences among students. Artificial intelligence relies on big data technology to collect and integrate multidimensional data such as students' classroom performance, online learning behavior, campus activity trajectories, online speech and emotions, and construct standardized student ideological portraits. By deeply analyzing students' value cognition, psychological state, and ideological confusion through algorithms, we can accurately identify the signs of negative thoughts, and push learning content tailored to different students' cognitive levels and ideological characteristics, changing the previous generalized and one size fits all education model and enhancing the targeting of ideological and political education.

3.1.3 Optimize the education management process and enhance the comprehensive efficiency of ideological and political work

In the work of ideological and political management in universities, artificial intelligence can replace teachers in completing repetitive basic tasks such as courseware production, homework grading, and data statistics, reducing labor costs, alleviating the pressure of administrative work for ideological and political teachers, and focusing on core educational aspects such as ideological guidance and value shaping. In addition, the intelligent monitoring system can monitor campus network public opinion 24/7, identify negative trends and information, achieve pre warning of risks and hidden dangers, build a normalized and intelligent ideological prevention and control system, and strengthen the ideological security defense line of the campus.

3.2 Challenges brought by artificial intelligence to ideological and political education in universities

3.2.1 Weakening the humanistic education temperature and dissolving the essential attributes of ideological and political education

The core of ideological and political education lies in emotional resonance, value cultivation, and ideological communication, possessing strong humanistic attributes. Artificial intelligence relies on mechanical algorithms for teaching and analysis, lacking human emotional empathy. Some universities overly rely on smart devices for teaching, weaken face-to-face communication and interaction between teachers and students, and replace ideological thinking and emotional communication with rigid technology indoctrination. Long term intelligent one-way output can easily lead to emotional deficiency in ideological and political education, weaken humanistic care, and violate the core principle of putting people first in ideological and political education.

3.2.2 The algorithm mechanism has defects, which can trigger students' cognitive and ideological difficulties

Intelligent push algorithms generally follow the operation logic of traffic priority and interest push, continuously pushing homogeneous information to students, forming an information cocoon, solidifying students' thinking and cognition, and limiting the development of their diverse thinking abilities. At the same time, the proliferation of deepfake technology and AI false information, as well as the distortion of history and the smearing of mainstream values, are spreading rapidly through intelligent channels. College students' values are not yet fully mature, their ability to discern information is insufficient, and they are highly susceptible to the erosion of erroneous ideological trends, which increases the difficulty of ideological guidance work.

3.2.3 There are data security risks and the ethical norms system is not yet sound

The operation of intelligent ideological and political education relies on massive amounts of personal data of students, covering private information such as learning status, psychological state, and personal opinions. Some universities have weak data protection technologies, and there are risks of leakage and abuse in data storage and transmission, which infringe on students' personal privacy. In addition, the ethical norms for the application of intelligent ideological and political education in China are not yet perfect, and problems such as algorithm bias, technology abuse, and vague responsibility definition are common. There is a lack of unified industry regulatory standards, which is not conducive to the standardized and long-term development of the intelligent ideological and political education industry.

4. Strategies for optimizing ideological and political education in universities in the era of artificial intelligence

To resolve the development dilemma brought by artificial intelligence to ideological and political education in universities, and fully leverage the positive value of intelligent technology in empowering education, universities should adhere to the development principle of upholding integrity and innovation, based on the fundamental task of cultivating morality and talents, and combine the characteristics of technological development with the laws of contemporary university growth to construct a systematic optimization strategy from five dimensions: humanistic adherence, algorithm optimization, faculty construction, institutional guarantee, and education mode. This study aims to balance the instrumental characteristics of technological tools and the humanistic attributes of ideological and political education, facilitate the in-depth integration of artificial intelligence and ideological and political teaching, and realize the high-quality and sustainable development of intelligent ideological and political education.

4.1 Adhere to the essence of education and balance the relationship between technology and humanities

Artificial intelligence only serves as an auxiliary tool for ideological and political education, and cannot replace human emotional education and value guidance. Adhering to the essence of humanistic education is the primary prerequisite for the development of intelligent ideological and political education. On the one hand, universities need to clarify the core purpose of putting people first in ideological and political education, clarify the positioning of technology assisted education, eliminate phenomena such as technology abuse and excessive intelligence, and avoid mechanized knowledge indoctrination. In classroom teaching, it is necessary to retain the teaching elements of two-way communication, ideological thinking, and emotional empathy between teachers and students, rely on face-to-face communication to gain insight into students' ideological confusion, and use humanistic warmth to dissolve the coldness of technology. On the other hand, universities need to firmly grasp the ideological leadership, adhere to the mainstream values orientation, strictly control the quality and direction of intelligent ideological and political teaching resources and push content, and conduct professional audits of red culture, current affairs theory, and other content. Meanwhile, educators integrate humanistic care, psychological counseling and value guidance in accordance with students' developmental characteristics to realize the organic integration of technological empowerment and humanistic education and lay a solid foundation for ideological and political education.

4.2 Optimizing algorithm mechanisms to overcome students' cognitive and ideological dilemmas

To address issues such as algorithm bias, information cocoons, and rampant false information, efforts need to be made in both technological improvement and literacy cultivation to optimize the intelligent algorithm operation system. At the technical level, universities collaborate with technology research and development teams to improve intelligent push algorithms, abandon the single interest push model, and build a diversified and balanced push mechanism that takes into account current affairs hotspots, red culture, professional literacy, and other diverse content, broadening the boundaries of student information reception. Researchers construct an intelligent information screening system and adopt big data filtering and in-depth identification technologies to block false information and harmful ideologies, thereby purifying the online ideological environment on campus. At the level of education, universities offer general courses related to artificial intelligence literacy and media identification ability, popularize basic knowledge of AI technology, analyze the harm of deepfakes and online rumors, enhance students' information identification ability and rational thinking ability, guide students to establish a scientific understanding of artificial intelligence, and actively avoid cognitive limitations caused by algorithms.

4.3 Strengthen the construction of teaching staff and create a composite team of ideological and political teachers

Ideological and political teachers are the core subject of intelligent ideological and political construction, and building a composite teaching staff is a key measure to promote the reform of the education model. Firstly, universities should establish a regular training system and regularly conduct specialized training on artificial intelligence technology, intelligent teaching platform operation, digital teaching design, etc., to make up for the shortcomings of teachers' digital technology and enhance their abilities in intelligent teaching, data analysis, and resource integration. Secondly, establish a platform for teacher exchange and discussion, promote academic exchanges among ideological and political teachers

from various universities, share intelligent teaching cases, innovate teaching design models, and draw on excellent integration experiences. Finally, improve the teacher assessment and incentive mechanism, incorporate the effectiveness of intelligent teaching applications into teacher performance evaluation, and encourage teachers to actively explore the integration path of AI and ideological and political classrooms. At the same time, we will strengthen the construction of teacher ethics and style, consolidate teachers' political literacy and educational responsibility, guide teachers to balance the use of technology and subjective educational role, and combine humanistic and digital technological abilities.

4.4 Improve the guarantee system and standardize the long-term development of intelligent ideological and political education

A sound system and facility guarantee are important supports for the stable operation of intelligent ideological and political education. In terms of data security, universities establish standardized student data management systems, clarify the boundaries of data collection, storage, and use, adopt encryption protection, firewalls, and other technical means to protect student privacy, and prevent data leakage, abuse, tampering, and other issues. From the perspective of ethical norms, relevant authorities formulate application guidelines for artificial intelligence in ideological and political education to prevent ethical risks including algorithmic discrimination and technology abuse, define the bottom line for technological application, and standardize the usage procedures of intelligent equipment. In terms of hardware facilities, they increase capital input to upgrade infrastructures such as smart classrooms, virtual simulation labs and big data platforms for ideological and political education, renew technical equipment, and optimize the digital teaching environment. Meanwhile, a long-term supervision mechanism is established with specialized staff in charge of intelligent platform maintenance, content auditing and risk inspection, so as to develop a standardized operational system for intelligent ideological and political education.

4.5 Innovative education model, building a multi-dimensional collaborative education pattern

To break the development limitations of a single educational subject, universities need to integrate multiple resources and build a comprehensive and diversified collaborative educational pattern. In terms of teaching mode, we will promote blended online and offline teaching, rely on AI virtual simulation to carry out immersive red teaching, and combine offline classrooms to carry out ideological discussions and practical teaching, achieving a deep integration of theoretical teaching and intelligent practice. In terms of resource integration, we will collaborate with the government, enterprises, and other universities to jointly build and share a digital resource library for ideological and political education. We will integrate high-quality open courses, red cultural and tourism resources, and current affairs databases to enrich intelligent teaching content. In terms of the main body of education, we will coordinate with counselors, professional course teachers, technical operation and maintenance personnel, and external experts to form a collaborative education team, clarify the responsibilities of each subject, and form a joint force for education. By innovating modes to broaden educational channels, we aim to create an intelligent ideological and political education system that encompasses the entire process, all aspects, and collaborative efforts of all staff, in order to continuously improve the effectiveness of ideological and political education.

5. Conclusion

This article is based on the trend of digital development in education, taking the deep integration of artificial intelligence technology and ideological and political education in universities as the research entry point. It systematically sorts out the relevant concepts and integration logic of ideological and political education in the era of intelligence, and objectively analyzes the current application status of artificial intelligence in the field of ideological and political education in universities. The article dialectically explains the dual attributes of artificial intelligence empowering ideological and political education in universities, clarifying its significant development advantages in enriching teaching carriers, achieving precise education, optimizing educational management, and improving evaluation systems. It provides technical support for solving the pain points of homogenization and backwardness in traditional ideological and political education. At the same time, technological iteration is accompanied by derivative risks, such as the lack of humanistic warmth, the solidification of algorithm cocoons, information security risks, and insufficient teacher adaptation, which also pose a severe challenge to the ideological construction and education work of universities.

To achieve a healthy integration of technology and ideological and political education, this article

proposes a systematic optimization path based on the current development difficulties. Research suggests that universities must adhere to the fundamental principle of cultivating students with moral character, clarify the attributes of technological tools, and maintain the foundation of humanistic education; By optimizing algorithmic operational logic to break students' cognitive constraints and enhance teenagers' media literacy cultivation, carrying out professional training to develop interdisciplinary teaching teams and consolidate the core competency of intelligent education, this study further improves the security guarantee system from institutional and technical dimensions to standardize the development order of intelligent ideological and political education, and integrates diversified resources to construct a multi-party collaborative education model for the comprehensive improvement of ideological and political teaching quality.

Although this study has sorted out and optimized the development path of artificial intelligence in ideological and political education, there are still certain limitations. The research focuses on macro analysis at the theoretical level, without conducting differentiated empirical research on different types of universities. The practical applicability of some optimization strategies needs to be tested in the long term. In the future, with the continuous innovation of artificial intelligence technology, universities should continue to adhere to the principle of upholding integrity and innovation, dynamically adjust the development mode of intelligent ideological and political education, and continuously improve technical ethical norms and risk prevention and control mechanisms. This research aims to further deepen the integration of artificial intelligence and ideological and political education, strike a balance between technical efficiency and humanistic care, and cultivate high-caliber young talents with solid ideals and convictions to keep pace with the developmental demands of the intelligent era.

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