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Empowerment of Artificial Intelligence in Teaching Reform of Ideological and Political Courses in Universities

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Abstract: The rapid development of artificial intelligence (AI) technology has brought new opportunities and challenges to the field of education. As an important link in cultivating students' comprehensive quality and socialist core values, it is necessary to carry out continuous teaching reform and innovation in ideological and political courses in colleges and universities. Based on the concept of AI empowering the teaching reform of ideological and political courses, this study aims to explore how to use artificial intelligence technology to improve the teaching effect and learning experience of ideological and political courses. The research first analyzes the application status of artificial intelligence technology in education, and then discusses the application potential of artificial intelligence in ideological and political courses. Subsequently, the teaching reform strategy of ideological and political courses based on artificial intelligence is proposed, including the use of virtual reality technology, the application of intelligent auxiliary teaching tools to enhance personalized teaching, and the construction of an intelligent learning management system. Lastly, a case analysis is conducted to explore the implementation effect of the teaching reform of ideological and political courses in universities. The results showed that the application of artificial intelligence technology can effectively improve the teaching effect and learning experience of ideological and political courses, and provide new ideas and methods for the teaching reform of ideological and political courses in universities.

Keywords: Artificial intelligence; Ideological and political courses in universities; Teaching reform; Learning experience; Teaching effect

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1. Introduction

With the rapid development of artificial intelligence (AI) technology, its application in the field of education has attracted increasing attention. As an important link to cultivating students' comprehensive quality and shaping good values, it is necessary to carry out teaching reform and innovation in ideological and political courses in colleges and universities to meet the needs of the development of the times. The empowerment of artificial intelligence has brought new opportunities and challenges to the teaching reform of ideological and political

courses in colleges and universities. This study aims to explore how to use artificial intelligence technology to improve the teaching effect and learning experience of ideological and political courses in universities [1]. Firstly, we will analyze the current application of AI technology in education to understand the results and potential it has achieved. Subsequently, we will focus on the potential of AI in ideological and political courses and how it can be applied to teaching practice. Specifically, we will put forward the teaching reform strategies of ideological and political courses based on artificial intelligence, including using virtual reality technology to enhance interactivity, enhancing personalized teaching with the help of intelligent auxiliary teaching tools [2], and building an intelligent learning management system. Lastly, we will discuss the implementation effect of ideological and political curriculum teaching reform in universities through case analysis. The research believes that the application of artificial intelligence technology can effectively improve the teaching effect and learning experience of ideological and political courses in colleges and universities, and provide new ideas and methods for the teaching reform of ideological and political courses. The results of this study will provide useful reference and guidance for the teaching practice of ideological and political courses in universities in the era of artificial intelligence, promote the development of ideological and political courses in universities, and cultivate young talents with more social responsibility and innovation ability in the new era [3].

2. Application of artificial intelligence in ideological and political courses in universities

2.1. Teaching of basic knowledge of artificial intelligence

The teaching of basic AI knowledge plays an important role in ideological and political courses in universities. As an emerging technology and discipline, the knowledge system of artificial intelligence covers a wide range of fields and in-depth fields, which is of great significance for the cultivation of students' comprehensive quality and the improvement of their thinking ability. The teaching of the basic knowledge of artificial intelligence should include the concept and development process of artificial intelligence. Explaining the definition, origin, and development process of artificial intelligence can help students fully understand the basic concept of artificial intelligence and its important role in social and economic development [4]. At the same time, the research field and application scenarios of artificial intelligence should also be introduced, so that students can understand the practical application of artificial intelligence in various fields. The teaching of the basic knowledge of artificial intelligence should also include the technology and algorithm of artificial intelligence. Students should learn the basic technologies of AI, such as machine learning, deep learning, data mining, as well as related algorithms and models [5]. By learning these technologies and algorithms, students can deeply understand the working principle of AI and master the development and application methods of AI systems. The teaching of the basic knowledge of artificial intelligence should also focus on the practice and application. Students can apply their AI technology and algorithms to solve practical problems through programming practice, case analysis, and project practice. For example, some AI experiments or projects can be designed for students to implement and apply AI technologies in order to develop their creativity and problem-solving skills. The teaching of basic knowledge of artificial intelligence should also be integrated with the core content of ideological and political courses, emphasizing the education of moral ethics, laws and regulations, and core values of artificial intelligence. Students need to understand the ethical and moral problems that the application of artificial intelligence may bring, learn relevant laws, regulations, and policies, cultivate correct values and moral literacy, and understand and use artificial intelligence technology [6]. The teaching of AI basic knowledge is of great significance to the reform of ideological and political courses in colleges and universities. By comprehensively and systematically teaching the basic concepts, development process, technologies and algorithms of AI, students' artificial intelligence literacy and

thinking ability can be improved, and their ability to analyze and solve complex problems can be cultivated, laying a solid foundation for their future study and work.

2.2. Integration of artificial intelligence and ideological and political courses

The integration of artificial intelligence and ideological and political courses is an important field in college education. It makes ideological and political courses more modern and have a sense of science and technology, and also helps to improve students' comprehensive quality and thinking ability. The integration of artificial intelligence and ideological and political courses can promote moral and ethical education. The application of artificial intelligence involves a range of ethical issues, such as privacy protection, data security, professional ethics, and so on. By teaching the moral and ethical issues of AI, students can be guided to think about the rational use of AI and their social responsibility, and develop their moral judgment and values [7]. The integration of artificial intelligence and ideological and political courses can also strengthen legal education. The development and application of artificial intelligence need to be regulated according to law, involving laws and regulations concerning intellectual property rights, data privacy, and ethical norms of artificial intelligence. By teaching the legal knowledge and regulations related to AI, students can understand the legal framework and norms of AI, and develop their legal thinking and legal awareness. Furthermore, the integration of artificial intelligence and ideological and political courses can strengthen the education of socialist core values [8]. The development of artificial intelligence must center the interests of human beings and serve the needs of the people. By teaching the core values of AI, such as innovation, openness, cooperation, and sharing, students can be guided to correctly understand and practice AI social responsibility, and develop their sense of social responsibility and civic awareness. In specific teaching, teachers can introduce case analysis, discussion classes, group discussion, and other methods to guide students to deeply think, discuss, and understand the ethics, law, and values of artificial intelligence. Teachers can also use artificial intelligence technology to assist in teaching, such as using virtual reality technology to show artificial intelligence application cases [9] and using the online platform for learning and discussion, so as to enhance students' participation and practical skills. The integration of artificial intelligence and ideological and political courses is of great significance to college education. By integrating the moral ethics, legal education, and core values of artificial intelligence into the ideological and political courses, students can cultivate their moral literacy, legal awareness, and social responsibility, so that they can develop comprehensive quality and innovation ability in the era of artificial intelligence.

2.3. Case analysis of the specific application of artificial intelligence in ideological and political course teaching

(1) Teaching assistance system based on artificial intelligence: By developing a teaching assistance system based on artificial intelligence, teachers can use the system to automatically analyze students' knowledge mastery and learning progress, and provide customized learning resources and teaching suggestions according to students' personalized needs. The system can use the technology of natural language processing and machine learning to identify students' problems and issues, and provide targeted solutions and guidance to help students better understand the content and ideas of ideological and political courses [10].

(2) Intelligent auxiliary system for discussion and debate of ideological and political courses: Using artificial intelligence technology, an intelligent auxiliary system can be developed for the discussion and debate activities of ideological and political courses. The system can automatically analyze students' opinions and arguments, and provide critical feedback and guidance. By utilizing natural language processing and text mining techniques, systems can help students find the shortcomings of

thinking, guide them to more in-depth analysis and thinking, and improve their critical thinking and debate skills.

(3) Using artificial intelligence technology to conduct ideological and political courses teaching evaluation: By developing an artificial intelligence-based teaching evaluation system, the teaching effect of ideological and political courses can be evaluated and analyzed. The system can collect and analyze students' learning data and performance [11], and through machine learning and data mining techniques, teaching evaluation reports and suggestions can be generated. Teachers can adjust and improve their teaching strategies according to these evaluation results to enhance the teaching quality and effect of ideological and political courses.

(4) Ideological and political education platform based on artificial intelligence: An ideological and political education platform based on artificial intelligence is established to integrate all kinds of ideological and political education resources and learning tools [12]. Through artificial intelligence technology, the platform can personally recommend learning materials, case analysis, and interactive discussion according to students' interests and learning needs. The platform can also provide the function of tracking students' learning progress and displaying learning results to help students better manage their learning and improve their learning motivation and effect.

To sum up, the application of artificial intelligence in education course teaching case is diverse. Through the establishment of a teaching auxiliary system based on artificial intelligence, education courses discussion debate system, teaching evaluation system, and ideological education platform, the effect of education course teaching and students' learning experience can be improved, and students' thinking ability training and comprehensive quality can be promoted.

3. Influence and challenges of the teaching reform of ideological and political courses in universities

3.1. Transformation of education and teaching mode

The education and teaching mode is experiencing the empowerment and transformation of artificial intelligence. The traditional teaching mode usually involves teachers imparting knowledge to students one to one. Currently, with the development of artificial intelligence, education and teaching mode is undergoing profound changes. Firstly, AI technology can provide teachers with more teaching tools and resources. With the support of artificial intelligence technology, teachers can better carry out teaching activities. For example, virtual reality technology can create an immersive learning environment and enhance students' learning experience. At the same time, teachers can provide students with personalized learning resources and guidance through online platforms and automated tools to better meet students' learning needs. Secondly, AI technology can change students' learning styles and experiences. The traditional teaching mode is mostly a passive receptive learning mode, but now, students can actively participate in learning through artificial intelligence technology [13]. For example, students can use the intelligent auxiliary system for self-directed learning and autonomous evaluation, and improve the learning effect through interaction and practice. At the same time, artificial intelligence technology can also provide students with more personalized learning opportunities and paths, and help them to better develop their interests and talents. In addition, AI technology can also improve teaching efficiency and the quality of education. Through the automated evaluation and feedback system, teachers can more accurately understand the students' learning situation and problems, and give timely guidance and support. At the same time, the application of artificial intelligence technology can help teachers to better analyze and manage teaching data, optimize the teaching process and resource allocation, and improve the quality and efficiency of education. It

should be noted that the change in the teaching mode of education does not mean replacing the role of teachers, but it is to provide teachers with more tools and resources to better exert their professional ability and creativity. Teachers remain the core of education, and their educational ideas and teaching ability are still important factors in the reform of education and teaching mode. To sum up, AI technology is changing the mode of teaching [14], providing more opportunities and resources for teachers and students. Through personalized learning, independent learning, and improving teaching efficiency, the empowerment of artificial intelligence is facilitating the reform of education and teaching mode, and promoting education towards a more intelligent and personalized direction.

3.2. Redefinition of the teacher-student relationship

The redefinition of the teacher-student relationship is one of the important changes in the field of education enabled by artificial intelligence technology. The traditional teacher-student relationship is usually a one-way mode of knowledge transmission and learning acceptance, but with the development of artificial intelligence technology, the teacher-student relationship is being deeply redefined. AI technology can provide teachers with more teaching support and resources. Teachers can use the auxiliary tools and online platforms of AI technology to better organize and manage teaching activities. Teachers can understand students' learning conditions and problems through automated assessment and feedback systems, and provide students with personalized guidance and support. At the same time, teachers can use the artificial intelligence system to automatically generate teaching courseware and teaching resources to improve teaching efficiency and quality. Artificial intelligence technology can change students' learning styles and experiences. Students can actively participate in learning through artificial intelligence technology, and their learning needs can be met by personalized learning resources and online learning platforms. Students can conduct self-learning and independent evaluation through the intelligent auxiliary system, and improve the learning effect through interaction and practice. This change in learning style also affects the teacher-student relationship. Students participate more actively and independently in learning, and the role of teachers has also changed from a traditional knowledge transmitter to a mentor and supporter of learning. AI technology can also promote closer cooperation and communication between teachers and students. Teachers can use tools such as online platforms and social media to communicate and interact with students. Teachers can guide students to think and discuss through online discussions and cooperative projects, and improve students' critical thinking and cooperation ability. At the same time, teachers can also understand students' learning progress and problems faced by using artificial intelligence technology, and provide timely assistance and guidance. It is important to note that the introduction of artificial intelligence technology does not mean replacing the role of teachers, but provides teachers with more tools and resources to help them better exert their professional ability and creativity. Teachers remain important instructors and guides in the process of education, and their educational ideas and teaching ability are still the core of the redefinition of the teacher-student relationship. The development of artificial intelligence technology is redefining the teacher-student relationship, transforming from traditional passive learning to student-centered active learning. Through personalized learning, online learning platforms, and enhanced interaction between teachers and students, the teacher-student relationship has become more closely cooperative and interactive, promoting students' independent learning and development. The redefinition of the teacher-student relationship promotes education to develop towards a more intelligent and personalized direction.

3.3. The need for technological equipment and resources

The integration of artificial intelligence into education and the reformation of teaching methods in the

classroom require the provision of necessary technological equipment and resources. This is a critical need due to the significant impact that technology has on teaching and learning processes. The following are some key points regarding the need for technological equipment and resources in education:

(1) Access to hardware and software: To effectively utilize AI in education, schools require access to adequate hardware such as computers, tablets, or smartphones, as well as reliable internet connections. These devices enable students and teachers to access AI-powered educational platforms and tools, facilitating engaging and interactive learning experiences [15].

(2) AI-powered educational software: Educational institutions require access to AI-powered software and applications that can support teaching and learning. These tools include intelligent tutoring systems, adaptive learning platforms, language processing software, and virtual reality environments. These resources can enhance traditional teaching methods and provide personalized learning experiences for students.

(3) Training and professional development: In order for teachers to effectively integrate AI into their teaching practices, they require training and professional development opportunities. Schools should provide teachers with workshops, seminars, or online courses to familiarize them with AI technologies and their integration into the curricula. Ongoing support and training are essential for teachers to feel confident in utilizing AI tools and ensuring their effective integration into classroom practices.

(4) Collaboration and knowledge sharing platforms: Technological resources should include collaboration platforms that enable students and teachers to connect, share resources, and engage in discussions. These platforms foster communication and collaboration, encouraging peer-to-peer learning and enhancing the educational experience. AI-powered systems can also assist in the organization and management of collaborative projects.

(5) Data analysis and monitoring tools: Access to data analysis tools and monitoring systems is crucial for schools and teachers to assess students' learning progress and identify areas for improvement. AI can help analyze large sets of data, provide insights into student performance, and support adaptive learning. These tools can assist in identifying struggling students, tailoring instruction to individual needs, and improving overall educational outcomes.

(6) Cybersecurity and privacy measures: With the increased use of technology in education, it is essential to establish robust cybersecurity measures and safeguard students' privacy. Educational institutions should invest in infrastructure security and data protection protocols, and provide training on online safety to both students and teachers.

In short, the integration of AI into education requires the provision of technological equipment and resources. Schools need access to the necessary hardware, software, and training opportunities to effectively utilize AI in teaching and learning processes. Collaboration platforms, data analysis tools, and cybersecurity measures are also essential components to ensure the successful integration of AI in education and the overall improvement of the learning experience for students.

4. Conclusion

After research, the empowerment of artificial intelligence in the teaching reform of ideological and political courses in universities is concluded as follows:

(1) Enhancing teaching efficiency: Artificial intelligence technology can realize intelligent monitoring and analysis of students' learning conditions, help teachers to discover students' learning problems in time,

and provide personalized learning suggestions and guidance, so as to improve teaching efficiency.

(2) Enriching teaching content: Artificial intelligence technology can provide more abundant teaching content for ideological and political courses, including multimedia teaching resources and online learning materials, through natural language processing and knowledge mapping, so that students can understand and master the knowledge of ideological and political courses more comprehensively.

(3) Expanding teaching methods: Artificial intelligence technology can realize the application of online interaction, virtual experiments, and distance teaching, enrich the traditional classroom teaching mode, provide more learning methods and learning opportunities, and meet the needs of students for personalized learning.

(4) Improving the evaluation method: Artificial intelligence technology can realize the comprehensive evaluation of students' learning process and learning outcomes, including automatic homework correction, learning behavior analysis, and academic performance prediction, etc., to provide a more accurate evaluation basis for teachers and promote students' learning motivation and enthusiasm.

To sum up, the empowerment of artificial intelligence in the teaching reform of ideological and political courses in colleges and universities has the advantages of enhancing teaching efficiency, enriching teaching content, expanding teaching methods, and improving evaluation methods. However, the application of artificial intelligence technology still requires further research and practice. Combined with the actual teaching needs and rational use of the advantages of artificial intelligence technology, it can promote the advancement of ideological and political curriculum teaching reform in colleges and universities.

Disclosure statement

The author declares no conflict of interest.

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