

Research on the Application of Artificial Intelligence in The 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 to cultivate students' comprehensive quality and socialist core values, it is necessary to carry out continuous teaching reform and innovation. Based on the idea of AI-enabled ideological and political course teaching reform, this study aims to explore how to use artificial intelligence technology to improve the teaching effect and learning experience of ideological and political course. This study 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. Then, it puts forward the teaching reform strategy of ideological and political course based on artificial intelligence, including the use of virtual reality technology, the application of intelligent auxiliary teaching tools to enhance personalized teaching, and the construction of intelligent learning management system. Finally, through case analysis, this paper discusses the effect of ideological and political teaching reform in colleges and universities. The results show 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 colleges and universities.

Keywords: Artificial Intelligence; College Ideological and Political Course; Teaching Reform; Learning Experience; Teaching Effect.

1. Introduction

With the rapid development of artificial intelligence technology, its application in the field of education has attracted more and more attention. As an important link to cultivate students' comprehensive quality and shape good values, ideological and political courses in colleges and universities are necessary to carry out teaching reform and innovation to meet the needs of the development of The Times. The enabling of artificial intelligence has brought new opportunities and challenges to the reform of ideological and political teaching [1]. 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 colleges and universities. First, we will analyze the current application of artificial intelligence technology in education to understand its achievements and potential [2]. Subsequently, we will focus on the potential of AI in the ideological and political curriculum and how it can be applied to teaching practice. Specifically, we will propose teaching reform strategies for ideological and political courses based on artificial intelligence, including enhancing interaction with virtual reality technology, strengthening personalized teaching with intelligent assisted teaching tools, and building an intelligent learning management system [3]. Finally, this paper discusses the implementation effect of ideological and political course teaching reform in colleges and universities through case analysis. The research holds 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 ideological and political teaching reform. The research results will provide useful reference and

guidance for the teaching practice of ideological and political courses in colleges and universities in the era of artificial intelligence, promote the development of ideological and political courses in colleges and universities, and train young talents with more social responsibility and innovative ability in the new era.

2. Application of Artificial Intelligence in Ideological and Political Teaching in Universities

2.1. Teaching Basic Knowledge of Artificial Intelligence

As an emerging technology and discipline, artificial intelligence, whose knowledge system involves a wide range and deep field, is of great significance for cultivating students' comprehensive quality and improving their thinking ability [4]. 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 concepts of artificial intelligence and its important role in social and economic development. At the same time, the research fields 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 techniques and algorithms of artificial intelligence. Students should learn the fundamental techniques of artificial intelligence, such as machine learning, deep learning, data mining, etc., as well as related algorithms and models. Through the study of these technologies and

algorithms, students can have an in-depth understanding of the working principles of artificial intelligence and master the development and application methods of artificial intelligence systems. The teaching of basic knowledge of artificial intelligence should also pay attention to practice and application. Students can apply the AI techniques and algorithms they have learned to solve practical problems through programming practice, case studies and project practice. For example, some AI experiments or projects could be designed for students to implement and apply AI techniques to cultivate their creativity and problem-solving skills. The teaching of basic knowledge of artificial intelligence should also be combined 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 issues that may be brought about by the application of artificial intelligence, learn relevant laws, regulations and policies, cultivate correct values and moral literacy, and understand and use artificial intelligence technology. The teaching of the basic knowledge of artificial intelligence is of great significance to the ideological and political course reform in colleges and universities. By comprehensively and systematically teaching the basic concepts, development processes, technologies and algorithms of artificial intelligence, cultivating students' artificial intelligence literacy can improve their thinking ability, cultivate their ability to analyze and solve complex problems, and lay 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 of higher education. It makes the ideological and political lessons more modern and scientific sense, 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 series of ethical issues, such as privacy protection, data security, and professional ethics [5]. Through the teaching of the moral and ethical issues of artificial intelligence, students are guided to think about the rational use of artificial intelligence and social responsibility, and students' moral judgment and values are cultivated. The integration of AI and ideological and political courses can also strengthen legal education. The development and application of artificial intelligence need to be regulated by law, involving laws and regulations on intellectual property rights, data privacy, and artificial intelligence ethics. By teaching legal knowledge and regulations related to artificial intelligence, students can understand the legal framework and norms of artificial intelligence, and cultivate students' legal thinking and legal consciousness. In addition, combining AI with ideological and political lessons can strengthen the education of socialist core values. The development of artificial intelligence must be centered on the interests of mankind and serve the needs of the people. By teaching the core values of artificial intelligence such as innovation, openness, cooperation, and sharing, students are guided to correctly understand and practice the social responsibility of artificial intelligence, and cultivate their sense of social responsibility and citizenship. In specific teaching, teachers can introduce case analysis, discussion class, group

discussion and other methods to guide students to deeply think, discuss and understand the ethics, laws and values of artificial intelligence. Teachers can also use artificial intelligence technology to assist teaching, such as using virtual reality technology to display artificial intelligence application cases, using online platforms for learning and discussion, and improving students' participation and practical ability [6]. The integration of artificial intelligence and ideological and political courses is of great significance to college education. The moral ethics, legal education, and core values of artificial intelligence will be integrated into the ideological and political curriculum to cultivate students' moral literacy, legal awareness, and social responsibility, and cultivate students' comprehensive quality and innovation ability in the era of artificial intelligence.

3. Analysis of Specific Application Cases of Artificial Intelligence in Ideological and Political Teaching

(1) AI-based teaching assistance system: Through the development of AI-based teaching assistance system, 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' individual needs. The system can use natural language processing and machine learning technology to identify students' problems and problems, and provide targeted solutions and guidance to help students better understand the content and ideas of ideological and political courses.

(2) Intelligent auxiliary system for ideological and political class discussion and debate: Using artificial intelligence technology, develop intelligent auxiliary system for ideological and political class discussion and debate activities. The system can automatically analyze students' opinions and arguments and provide critical feedback and guidance, and by utilizing natural language processing and text mining techniques, the system can help students find shortcomings in English.

(3) Using artificial intelligence technology for ideological and political course teaching evaluation: By developing an AI-based ideological and political course teaching evaluation system, the teaching effect of ideological and political course is evaluated and analyzed. The system can collect and analyze students' learning data and performance, and generate instructional evaluation reports and recommendations through machine learning and data mining techniques. Teachers can adjust and improve the teaching strategies according to the evaluation results, and improve the teaching quality and effect of ideological and political courses.

(4) Ideological and political education platform based on artificial intelligence: Establish an ideological and political education platform based on artificial intelligence and integrate all kinds of ideological and political education resources and learning tools. Through artificial intelligence technology, the platform can personally recommend learning materials, case studies, interactive discussions, etc., 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

educational curriculum teaching cases is diverse. Through the establishment of AI-based teaching assistance system, education curriculum discussion and debate system, teaching evaluation system and ideological education platform, the teaching effect of education curriculum and students' learning experience are improved, and the training of students' thinking ability and the improvement of comprehensive quality are promoted.

4. Influence and Challenge of Ideological and Political Teaching Reform in Colleges and Universities

(1) The transformation of education and teaching mode

The education and teaching model is undergoing the empowerment and transformation of artificial intelligence [7]. The traditional teaching mode is that teachers impart knowledge to students one on one. At present, with the development of artificial intelligence, the education and teaching model is undergoing profound changes. First, 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 immersive learning environments that enhance students' learning experiences. 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, artificial intelligence technology can change the way students learn and experience. Traditional teaching mode is mostly passive acceptance learning mode, but now, through artificial intelligence technology, students can actively participate in learning. For example, students can make use of intelligent assistant systems for self-learning and self-evaluation, and improve learning results through interaction and practice. At the same time, AI technology can also provide students with more personalized learning opportunities and paths to help them better develop their interests and talents. In addition, AI technology can also improve teaching efficiency and education quality. Through automated assessment and feedback systems, teachers can more accurately understand students' learning situations and problems, and give timely guidance and support. At the same time, the application of artificial intelligence technology can help teachers better analyze and manage teaching data, optimize teaching processes and resource allocation, and improve education quality and efficiency.

(2) Redefine the relationship between teachers and students

The redefinition of teacher-student relationship is one of the important changes in the field of education brought about by artificial intelligence technology. The traditional teacher-student relationship is usually a one-way mode of knowledge transfer 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 make use of AI-enabled AIDSS and online platforms to better organize and manage teaching activities. Teachers can learn about students' learning status and problems through automated assessment and feedback systems, and provide personalized guidance and support to students. At the same time, teachers can use artificial intelligence system to automatically generate teaching courseware and teaching resources to improve teaching

efficiency and quality. Artificial intelligence technology can change the way students learn and experience. Through artificial intelligence technology, students can actively participate in learning, and personalized learning resources and online learning platforms can meet students' learning needs. Students can conduct independent learning and evaluation through intelligent auxiliary system, and improve learning effect through interaction and practice. This change in learning style has also affected the teacher-student relationship. Students are more actively and autonomously involved in learning, and the role of teachers has changed from traditional knowledge transmitters to mentors and supporters of learning. AI technology can also facilitate 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 collaborative projects to improve students' critical thinking and collaborative skills. At the same time, teachers can also use artificial intelligence technology to understand students' learning progress and problems, and provide timely help and guidance. It should be noted that the introduction of AI technology is not meant to replace the role of teachers, but to provide teachers with more tools and resources to help them better exert their professional competence and creativity. Teachers remain important guides and facilitators in the educational process, and their educational concepts and teaching abilities remain central to redefining the teacher-student relationship. The development of artificial intelligence technology is redefining the teacher-student relationship from traditional passive learning to student-centered active learning. Through personalized learning, online learning platforms, and enhanced interaction between teachers and students, the relationship between teachers and students is closer, and cooperation and interaction are promoted to promote students' independent learning and development. The redefinition of teacher-student relationship promotes the development of education in a more intelligent and personalized direction.

(3) The demand for technical equipment and resources

Classrooms need to provide the necessary technical equipment and resources for the integration of artificial intelligence and education and the reform of teaching methods. With technology having a significant impact on the teaching process, this is a key need.

In order for teachers to effectively integrate AI into their teaching practices, they need training and professional development opportunities[8]. Schools should offer workshops, seminars or online courses for teachers to familiarize them with AI technology and integrate it into their curriculum. Ongoing support and training are essential for teachers to have confidence in using AI tools and to ensure their effective integration into classroom practice. Schools need access to the necessary hardware, software, and network services to effectively utilize AI in their teaching and learning processes. Collaboration platforms, data analytics tools, and cybersecurity measures are also important components of ensuring the successful integration of AI into education to improve the overall student learning experience.

5. Conclusion and Prospect

As a major theoretical proposition, the new quality productivity highlights the application prospect of science and technology in production and life. We will take the

training of high-quality innovative talents as the leading role, deepen digital collaboration, and promote the co-growth of education supply side and industrial demand. Through research and analysis, it has the advantages of improving teaching efficiency, enriching teaching content, expanding teaching methods and improving evaluation methods to enable artificial intelligence in the teaching reform of ideological and political courses in colleges and universities. However, the application of artificial intelligence technology needs further research and practice. Combining with the actual teaching needs, rational use of the advantages of artificial intelligence technology can promote the reform of ideological and political course teaching in colleges and universities.

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References

- [1] ZHANG Lei. Artificial Intelligence empowers Ideological and Political Theory Course [J]. Ideological and Political Course Teaching,2024, (03):82-86.
- [2] Ai Silin. The rich connotation, methodological implication and practical requirement of "The essence of Ideological and political Course is to make sense" [J]. Research on Marxist Theory, 2019,10(03):11-18.
- [3] Qi Leilei, Li Chenxi. Research on Evaluation of Data-driven decision-making Ability of Ideological and Political Course teachers in Universities based on LDA-BP neural network [J]. Heilongjiang province higher education research, 2024, and (3): 110-119. The DOI: 10.19903 / j.carol carroll nki cn23-1074 / g. 2024.03.024.
- [4] Anjing. Opportunities, Challenges and Paths of Ideological and Political course reform in colleges and universities under the background of 5G technology [J]. Ideological and Theoretical Education Guide,2022, (04):118-123.
- [5] Sun Dian, Xu Yingying. A practical and innovative research on the integration of curriculum Ideology and politics into BOPPPS teaching model -- A case study of "Economics of Pension Insurance" course [J]. Journal of Shenyang Institute of Technology (Social Science Edition),2024,20(01):132-136.
- [6] LIU Yong. Exploration and Practice of Ideological and Political Education in Basic Computer Courses [J]. Journal of Shenyang Institute of Technology (Social Science Edition), 2023, 19(04):113-116.
- [7] Xiang Juan. Practical Dilemma and Path Exploration of Ideological and Political Education in Colleges and Universities from the perspective of Artificial Intelligence -- Review of Research on Improving the Teaching Quality of Ideological and Political Theory Courses in the Era of Artificial Intelligence [J]. Science and Technology Management Research, 2019,43(14):260.
- [8] Wang K .Facing the New Era: Supply-side Structural Reform of Civic Education in Private Colleges and Universities under the Environment of Integrated Media[J].International Journal of Social Science and Education Research,2024,7(4).