

Analysis on the Innovative Development of University Education and Teaching Management from the Perspective of Artificial Intelligence

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Abstract: From the perspective of artificial intelligence, this paper analyzes the innovation and development of university education and teaching management, and discusses the application of artificial intelligence in education and teaching management. It first reviews the traditional mode of college education and teaching management and points out its shortcomings. Subsequently, the advantages and application scenarios of artificial intelligence in education and teaching management are introduced, including intelligent course design, intelligent teaching evaluation and intelligent auxiliary teaching. Finally, it summarizes the innovative development of university education and teaching management from the perspective of artificial intelligence, and prospects the future development prospects.

Keywords: artificial intelligence; college education; teaching management; innovation and development

1. Introduction

With the continuous development and popularization of artificial intelligence technology, it has gradually penetrated into various fields. As an important field, college education and teaching management is gradually influenced by artificial intelligence technology. The following is intended to discuss the innovative development of university education and teaching management in the perspective of artificial intelligence, as well as the application of artificial intelligence in education and teaching management, so as to provide reference for the reform and development of college education and teaching management.

2. The content and characteristics of university education and teaching management

Higher education teaching management refers to the teaching activities in higher education planning, organization, coordination, supervision and evaluation of a series of management activities, it involves the teaching plan, teaching quality, teachers, student management and service, teaching facilities and technical support, etc., its characteristics include diversified teaching mode, the forefront of education teaching idea, quality and benefit orientation, multilateral cooperation, etc.

(1) Content aspect

The education and teaching management in colleges and universities needs to make teaching plans, manage the teaching quality problems of course content, teaching methods, textbook selection and so on. Teaching management needs to pay attention to the construction and training of teachers, provide training for teachers, improve the teaching level, and encourage teachers to carry out education and teaching research. At the same time, we need to pay attention to student management and service, including school roll management, student work, students' ideological and political education, student employment and other aspects. In addition, education and teaching management in colleges and universities needs to manage and update teaching facilities and technical equipment to provide a better teaching environment and teaching support.

(2) Characteristic aspects

Education and teaching management in colleges and universities needs to pay attention to a variety of teaching modes, such as face-to-face teaching, online teaching, practical teaching, etc., and provide corresponding teaching support. Management needs to keep up with the development trend of The

Times, pay attention to the latest education and teaching ideas and methods, to improve the quality of education and teaching, and pay attention to the quality and efficiency of education and teaching, continuous evaluation and monitoring, and continuous improvement. In addition, the education and teaching management of colleges and universities needs to cooperate with teachers, students, parents, society and other parties to form a good education and teaching ecology^[1].

(3) The development trend of college education and teaching management in the new era

Under the background of the new era, the management of college education and teaching is facing new opportunities and challenges. We must keep pace with The Times and adapt to the needs of The Times in order to continuously improve the level of education and teaching management in colleges and universities. First of all, the university education teaching management is in the direction of informatization and digital, university education teaching management will be more and more dependent on information technology and digital technology, through the establishment of education teaching information platform, digital teaching resources, intelligent teaching management system, realize the education teaching management of intelligent, digital and intensive. Secondly, college education and teaching management will pay more and more attention to personalized and differentiated education, because each student has his or her own learning style, interest, ability and characteristics. College education and teaching management will provide students with personalized education services, such as teaching content, teaching methods and teaching resources, through artificial intelligence technology and big data analysis, so as to better meet the needs of students and improve the teaching effect. Finally, university education and teaching management will pay more and more attention to globalization and international education, because globalization and internationalization have become the trend of the development of The Times. The university education and teaching management will improve students' international quality and competitiveness by strengthening international educational exchanges and cooperation, carrying out cross-cultural education research, and cultivating talents with international vision^[2].

3. The influence of artificial intelligence technology on university education and teaching management

The impact of artificial intelligence technology on education and teaching management in colleges and universities is not only limited to teaching content, curriculum setting and teaching methods, but also plays a positive role in intelligent teaching support, personalized education, intelligent evaluation of teaching quality and improvement of teaching efficiency. In the future, with the continuous development and application of artificial intelligence technology, it will further change the appearance of university education and teaching management, and bring more changes and innovations to university education and teaching.

(1) Intelligent teaching support

Artificial intelligence technology can provide intelligent teaching support for university education and teaching management. For example, online learning platforms can intelligently recommend learning content and intelligently evaluate students' learning conditions according to students' learning conditions, and it can also help teachers better manage courses, design course content, and evaluate students' performance.

(2) Personalized education

Artificial intelligence technology can realize the personalization of education and teaching, and make intelligent diagnosis and matching according to different students' learning styles, interests, abilities and characteristics, so as to provide students with educational resources and services more close to their needs^[3].

(3) Intelligent evaluation of teaching quality

Artificial intelligence technology can intelligently evaluate the teaching quality, and can evaluate the teaching effect more objectively, comprehensively and accurately, so as to better help schools in the teaching quality management.

(4) Improve teaching efficiency

Artificial intelligence technology can help teachers improve teaching efficiency. For example, artificial intelligence can replace teachers to carry out some repetitive work, such as setting questions

and correcting answers, so as to reduce the burden of teachers and improve teaching efficiency.

4. Thinking on the innovative development of university education and Teaching management from the perspective of artificial intelligence

(1) Personalized learning

College education and teaching management based on artificial intelligence technology can provide personalized learning experience and services for each student. By collecting and analyzing students' learning data and behaviors, we can provide students with appropriate learning content, learning methods and resource recommendations according to their learning needs and characteristics, so as to improve students' learning effect and satisfaction. Personalized learning is to use artificial intelligence technology to provide students with personalized teaching content, learning methods and resource recommendation according to their learning needs and characteristics, so as to improve students' learning effect and satisfaction. Among them, the adaptive learning system is one of the educational applications based on artificial intelligence technology. By collecting students' learning data and behavior, it provides personalized learning experience and services for each student. The adaptive learning system can adjust the teaching content and difficulty according to the students' learning progress and understanding degree, and provide the learning resources and exercises suitable for the students. In addition, the intelligent tutoring system is a system that uses artificial intelligence technology to provide students with personalized tutoring services. For example, the intelligent tutoring system can provide customized solutions and guidance for students according to their learning status and problems, such as targeted explanations and prompts for students' learning difficulties and mistakes, as well as providing students with suitable learning resources and exercises^[4].

(2) Analysis of education data

The education and teaching management in colleges and universities can use artificial intelligence technology to analyze and mine the massive educational data, so as to find out the learning characteristics and problems of students, and analyze the teaching level and teaching effect of teachers. Through the analysis of educational data, it can provide decision support and scientific basis for the university education and teaching management, and improve the teaching quality and management level.

1) Student achievement analysis: Student performance analysis can help educational institutions and teachers understand students' learning situation and performance, as well as compare and evaluate the teaching effects of different classes, disciplines and teachers. For example, educational institutions and teachers can use student performance analysis to identify student strengths and weaknesses, and provide targeted teaching resources and support, as well as optimize curriculum and teaching methods^[5].

2) Student behavior analysis: Student behavior analysis can help educational institutions and teachers to understand students' behavior and learning habits, such as students' attendance records, library borrowing records, classroom participation, etc. By analyzing these data, educational institutions and teachers can provide students with more personalized learning support and services, such as providing targeted learning resources and support, as well as adjusting the curriculum and teaching methods.

3) Education input and output analysis: Education input and output analysis can help educational institutions and governments to understand the benefits and returns of educational input, such as students' graduation situation, employment situation, social contribution, etc. By analyzing these data, educational institutions and governments can optimize the allocation of educational resources and adjust the curriculum setting and teaching methods to improve the quality and efficiency of education.

4) Analysis of the utilization efficiency of educational resources: The analysis of the utilization efficiency of educational resources can help educational institutions and teachers to understand the utilization situation and efficiency of educational resources, such as the use of classrooms and teaching equipment, etc. By analyzing these data, educational institutions and teachers can optimize the utilization of educational resources and improve teaching efficiency and efficiency.

(3) Intelligent teaching

The education and teaching management in colleges and universities can use the artificial intelligence technology to realize the teaching intelligence. Through intelligent teaching, it can provide

students with more intelligent and personalized teaching services and resources, provide teachers with more intelligent and efficient teaching tools and platforms, and improve the teaching effect and management level. Automatic evaluation can be coordinated with it. The university education and teaching management based on artificial intelligence technology can automatically evaluate students' learning results and teaching effects, which can reduce the work burden of teachers, improve the efficiency and accuracy of evaluation, and provide scientific basis for teaching management.

The first is the intelligent teaching platform. Intelligent teaching platform is an online education platform based on artificial intelligence technology, providing students with more flexible, convenient and efficient learning methods and services. For example, the intelligent teaching platform can recommend suitable learning resources and course content for students according to their learning needs and interests, as well as provide students with intelligent learning support and auxiliary tools.

It is intelligent teaching material next. Intelligent teaching materials are teaching materials based on artificial intelligence technology, which can provide students with personalized learning content and auxiliary tools according to their learning needs and characteristics. For example, intelligent teaching materials can provide students with suitable teaching resources and exercises according to their learning status and problems, and provide students with customized learning support and auxiliary tools, such as speech recognition, image recognition and natural language processing technologies^[6].

(4) Online education

Online education based on artificial intelligence technology is developing rapidly, and education management in universities can actively carry out online education. Through online education, it can provide students with more flexible, convenient and efficient learning methods and services, provide teachers with more extensive and diversified teaching platforms and resources, and improve the teaching quality and management level. First of all, there are mainly some well-known platforms in China:

1) China University MOOC is an online education platform jointly established by nearly 20 universities including China Higher Education Press, Tsinghua University, Peking University and Fudan University. It provides free high-quality online courses, including computer science, finance, foreign languages and other fields.

2) MOOC China is an online education platform supervised by the Ministry of Education of the People's Republic of China, aiming to provide quality online education resources and provide better learning and teaching experience for students and teachers. MOOC China offers a large number of free online courses and certification courses, covering many disciplines and fields.

3) Good University Online is an online education platform established by New Oriental Group, with partners including Tsinghua University, Peking University, the Chinese University of Hong Kong and many other universities. Good University Online offers free online courses and certification courses covering finance, computer science, business management and more.

In general, online education platforms in Chinese universities have gradually matured, providing more abundant and convenient learning resources for students and teachers.

Secondly, foreign platforms can also provide reference for our development, such as:

1) Coursera is an online learning platform offering a variety of online programs, degrees and certification programs. Students can take courses from world-leading universities and businesses through Coursera and receive a certificate after completing the course.

2) The MOOC (Massive Open Online Courses) is a large-scale open online course, usually offered by universities and other educational institutions. MOOC courses are usually free and can be accessed anytime, anywhere over the Internet. The goal of the MOOC is to bring quality education to more people.

3) Khan Academy is a non-profit online learning platform offering free video courses and online exercises designed to help students learn a variety of disciplines and skills. The Khan Academy's video courses cover math, science, computer science, history and art.

5. Conclusion

To sum up, this paper analyzes the innovative development of university education and teaching

management from the perspective of artificial intelligence technology. We believe that the application of artificial intelligence technology in education and teaching management can better meet the personalized learning needs of students, improve the quality and efficiency of teaching, and also provide teachers with better teaching support and management tools. Although there are still some challenges and uncertainties in artificial intelligence technology in education and teaching management, we believe that through continuous efforts and innovation, artificial intelligence technology will certainly bring more opportunities and challenges for the development of education and teaching management in universities.

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