

Research on Intelligent Campus Construction Enabled by Artificial Intelligence and Big Data

Shucheng Li

Tiangong University TianJin 300387

Abstract: With the rapid development of artificial intelligence and big data technology, it is more and more widely used in the field of education. For example, the use of artificial intelligence and big data technology can provide teachers with more accurate teaching resources and data analysis of students' personalized learning needs. At present, there is still much room for improvement in the level of smart campus construction in Chinese colleges and universities. With the continuous development of artificial intelligence and big data technology, the construction of smart campus in colleges and universities needs to build a smart teaching environment, realize the collection and analysis of student data, and realize the intelligent service for teachers and students. This paper first describes the application status of artificial intelligence and big data technology in the construction of college smart campus, and analyzes its existing problems, and finally puts forward the application strategy of artificial intelligence and big data technology in the construction of college smart campus.

Keywords: Artificial intelligence; Big data; Smart campus construction; Concrete strategy

Fund Project:

2019 Scientific Research Program of Tianjin Municipal Education Commission, 2019SK007, Research on Copyright Issues of AI Generated Content.

2021 Tianjin Educational Science Planning Project, General Project, Project Name: Research on Promoting Xi Jinping Thought on the Rule of Law into Teaching Materials, Class and Mind, Project No.: CIE210158.

Introduction:

The construction of college smart campus is an important direction of the current information development of colleges and universities, and also an important measure to promote the modernization of education. Under the new situation, artificial intelligence and big data technology are widely used in the construction of smart campuses in colleges and universities, and their application value is becoming increasingly prominent. However, due to the constraints of various factors, there are still some problems in the application of artificial intelligence and big data in the construction of smart campus in colleges and universities, which need to be deeply analyzed in practice.

1. Problems existing in the construction of college smart campus

1.1 Lack of understanding of smart campus

At present, some colleges and universities have insufficient understanding of the smart campus and lack of attention to the construction of smart campus. In the context of the new era, smart campus combines modern information technology with campus management, and uses information technology means such as big data and cloud computing to realize the digitalization and intelligence of teaching, management and services. The construction of smart campus can realize the organic combination of "wisdom" and "education", provide better learning and living environment and services for teachers and students, and improve the quality of education and teaching. At the same time, colleges and universities should fully realize the importance of smart campus construction and clarify their own development goals. Only by correctly understanding the construction of smart campus can we determine the key work of smart campus construction. College administrators need to start from the goal of smart campus construction and clarify

the key contents of smart campus construction. At the same time, university administrators need to pay attention to integrating data resources and sharing data information to promote the improvement of university information management ^[1].

1.2 Data sharing difficulties

In the process of building a smart campus, data sharing is a key link. At present, most colleges and universities in China lack the awareness of data sharing in the information construction, which leads to the inability to effectively use the internal data of the school, increasing the burden of school management and teachers and students' learning life. First of all, because there are different information systems and management software in the school, the systems are incompatible with each other and the data cannot be shared. Secondly, the lack of effective communication between the internal information systems of colleges and universities leads to the high cost of information construction. Finally, universities lack effective data sharing mechanism in the process of information construction. For example, some universities do not consider the information security of teachers and students when building campus networks, resulting in the leakage of personal information of students and teachers. The existence of these problems will seriously affect the efficiency and quality of college smart campus construction.

1.3 Lack of a sound data security management system

In the construction of smart campus, data security management is an important part, but at present, many colleges and universities have not established a perfect data security management system, leading to a greater risk of data security. First of all, in the data processing of colleges and universities, many colleges and universities have not formulated detailed data security management system, which leads to greater risks in the collection, storage, transmission and processing of data information. Secondly, in the construction of college smart campus, there are many accounts and passwords in the school information network system, but these accounts and passwords are easy to be illegally obtained, copied or stolen. Thirdly, due to the high frequency of leakage of personal privacy information of students and teachers, there are certain security risks in the construction of smart campus in colleges and universities. Finally, due to the lack of a perfect data security management system, university data security management personnel can not find the security risks of data information in time.

2. The application strategy of artificial intelligence and big data in the construction of college smart campus

2.1 Improve the top-level design and make reasonable planning

In the construction of smart campus in colleges and universities, it is necessary to strengthen top-level design, formulate reasonable planning, and grasp the direction of smart campus construction in general. From the perspective of artificial intelligence and big data technology application, the top-level design of smart campus construction in colleges and universities needs to include three aspects: First, it is necessary to clarify the development goals of the school, and on this basis determine the basic concept, technical system and management mode of smart campus construction; Second, it is necessary to clarify the school's school-running positioning, talent training goals and teacher development goals, and take the construction of smart campus as an important part of the school's overall strategic goals. Third, it is necessary to clarify the basic direction of the application of artificial intelligence and big data technology, and formulate corresponding tasks according to different stages. In particular, it is necessary to deal with the relationship between the construction of smart campus and the application of artificial intelligence and big data technology in practice, and attach importance to the role of artificial intelligence and big data technology in the construction of smart campus. At the same time, it is also necessary to design the overall framework for the application of artificial intelligence and big data technology in schools to form a reasonable and scientific planning scheme ^[2].

2.2 Build an education cloud platform to promote resource integration

Under the application of artificial intelligence and big data technology, the construction of education cloud platform should be accelerated in the construction of college smart campus. Based on the education cloud platform, colleges and universities can integrate teaching resources and learning resources, strengthen the management of teaching activities and teaching modes, and improve the utilization rate of educational resources, so as to promote the further development of college smart campus construction. For example, in the aspect of teaching resources integration, colleges and universities can integrate the teaching resources scattered in various departments to form a unified teaching resources database; In the integration of learning resources, universities can integrate multimedia teaching courses, professional courses, experimental courses, etc. In terms of learning activity management, colleges and universities can integrate online and offline learning activities to form a unified learning platform. In short, the construction of education cloud platform can provide strong support for the construction of college smart campus.

2.3 Promote the construction of smart teaching environment and build smart classrooms

With the support of artificial intelligence and big data technology, colleges and universities can use cloud computing technology, big data analysis technology and smart terminal equipment to achieve intelligent management of classrooms, libraries and other places. For example, in the construction of smart classrooms, intelligent terminals in classrooms can be interconnected with cloud platforms, and teachers can use intelligent terminal devices to realize real-time monitoring of students' learning status and behavior, and adjust teaching methods and strategies in time through the analysis of students' learning data. At the same time, teachers can also use intelligent terminal devices to transfer teaching resources to the cloud platform, and provide personalized guidance to students through the cloud platform. In terms of library construction, intelligent terminal equipment can be used to collect, transmit and analyze information such as the internal environment and equipment of the library in real time, so as to provide readers with more accurate and personalized services. In the construction of smart campus environment, intelligent management can also rely on big data, artificial intelligence and other technologies.

2.4 Innovate the educational evaluation mechanism to help the reform of talent evaluation

In the construction of smart campus, artificial intelligence and big data technology can realize the dynamic monitoring of the teaching process and teaching effect, and provide comprehensive, accurate and real data support for teachers to carry out teaching activities. Therefore, it is necessary for college teachers to change the concept of educational evaluation, actively participate in the reform of educational evaluation, innovate the educational evaluation mechanism, and promote the reform of talent evaluation. First of all, we should build an intelligent education evaluation platform based on data analysis. With the school as the unit, the relevant data collection, storage and analysis in the construction of smart campus will be incorporated into the unified platform, and the data will be sorted and managed. On this basis, big data analysis technology is used to comprehensively evaluate and analyze students' learning process and learning results, and optimize and improve teaching methods and teaching contents. Secondly, teachers should be promoted to participate in the reform of teaching evaluation. College teachers can carry out teaching activities through the combination of online and offline, and give timely feedback and evaluation of teaching content. Finally, artificial intelligence technology should be combined with educational evaluation. Artificial intelligence technology is used to extract and analyze students' learning data and build an intelligent learning model. On this basis, the use of big data technology to achieve accurate portrait analysis of teachers, combined with student learning data and teacher teaching effect feedback information, optimize the education evaluation program.

3. Closing remarks

With the development of artificial intelligence and big data technology, its application in the field of education is more and more extensive. The construction of college smart campus needs to build a smart teaching environment, realize the collection and analysis of student data, and realize the intelligent service for teachers and students. However, there are still many problems in the construction of smart campus in Chinese colleges and universities, such as inconsistent data standards, lack of perfect data management system, and lack of high-quality data analysis talents. In order to solve these problems, it is necessary to strengthen the construction of data standardization in the construction of college smart campus, ensure the replicability of data, and strengthen the construction of college data management talent team, so as to ensure that artificial intelligence and big data technology can be better applied in college smart campus.

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