The Development of Big Data Analysis Technology and Its Application in Modern Education

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Abstract: In the teaching process of universities, modern educational technology plays an increasingly important role, especially in providing ideological and political education to students. Modern educational technology is an efficient platform and organic carrier. Teachers of the "Two Courses" can use multimedia network technology to break free from the traditional and boring teaching methods. In this regard, this article conducts research on the development of big data analysis technology and its application in modern education. Although big data has brought challenges such as the lack of popularization of "one-on-one digital learning" in education, the need for training in school data usage, and the need for uniformity in various student data formats, the application of big data in education is an important force for future education reform and development. The spatiotemporal boundaries and information barriers of the educational environment have been broken, and the educational theories and laws that have been hidden under data for a long time will become increasingly prominent and clear. Talent cultivation will be more flexible and diverse. In line with the development of the big data era, modern education reform has entered a new stage, and the field of modern education development will usher in an unprecedented transformation.

1. Introduction

Modern Education Center, as one of the teaching auxiliary institutions in colleges and universities, can easily embed various cases by means of modern educational technology. The inserted audio, video and other intuitive materials can make the teaching content more vivid, intuitive and vivid, stimulate students' interest in learning and improve the teaching effect. "strive to run a satisfactory education for the people", "strive to improve the quality of education" and "promote the connotative development of higher education". All these involve the fundamental question of who to train and how to train people. It marks that China's higher education has shifted from the extensional development of pursuing quantitative expansion to the connotative development stage with the goal of improving quality, which points out the direction for China's educational reform and development [1]. Modern educational technology is an efficient platform and an organic carrier. Teachers of the "two courses" can use multimedia network technology to get rid of the traditional boring way of attending classes.

With the rapid development of science and technology and the Internet, big data has become the focus of all fields, which has a great impact on all fields, and education is no exception. The concept of "big data" was first put forward in the 1990s, which refers to data that cannot be obtained, analyzed and managed by general statistical tools in a certain period of time [2]. After students build learning situations on the original knowledge system, with more and more knowledge, they gradually plan new knowledge into learning situations. Every time they connect to the cloud, they can always find their own learning points in the first time, so as to start learning. Big data technology analyzes and summarizes the details of teachers' teaching process and students' class status, so as to find out the laws of teaching activities, make teachers adjust teaching contents and methods according to the feedback information, and better check and promote the teaching work. In the era of NPC data, we can analyze more data and even process all the data related to a special phenomenon. Utilizing existing teaching resources and developing new ones, optimizing teaching

process and promoting teaching reform, innovating teaching mode, improving teaching environment and improving teaching quality play an important role in promoting the modernization of the three functions of teaching, scientific research and social service in colleges and universities, especially in higher vocational colleges focusing on cultivating applied talents [3-4].

In view of the problems existing in ideological and political education in colleges and universities. A new working mode for further improving the quality of ideological and political education. In this case, the user only needs to store the data in the cloud, and the cloud is responsible for the specific storage strategy. In line with the development of the era of big data, modern education reform has entered a new stage, and the field of modern education development will usher in an unprecedented great change [5-6].

2. Functions of big data analysis work

2.1. Educational and teaching functions

The use of data analysis tools can mine more high-quality educational resources from educational data, promoting the scientific management of universities and the construction of smart and digital campuses. The current teaching center also undertakes the task of actively promoting education and teaching reform, developing modern educational technologies such as multimedia, network, and MOOC, which can vigorously promote the reform of educational methods and methods, and promote the smooth completion of teaching tasks in the college. The transformation of educational concepts, methods, content, and even institutional mechanisms by big data has put forward more urgent and practical requirements for the cultivation of new innovative talents. The increasingly powerful internet, multimedia and concept software, open-source software, and others have provided teachers and students with a more free and flexible learning and exploration space, greatly expanding their horizons for knowledge[7]. According to student feedback, timely modify and improve the teaching courseware, teaching handouts and learning materials of the operating system course, and analyze whether the current educational technology can promote students' learning, including students' active collaborative learning and personalized development. The course teaching platform established based on big data technology analysis is shown in Figure 1.
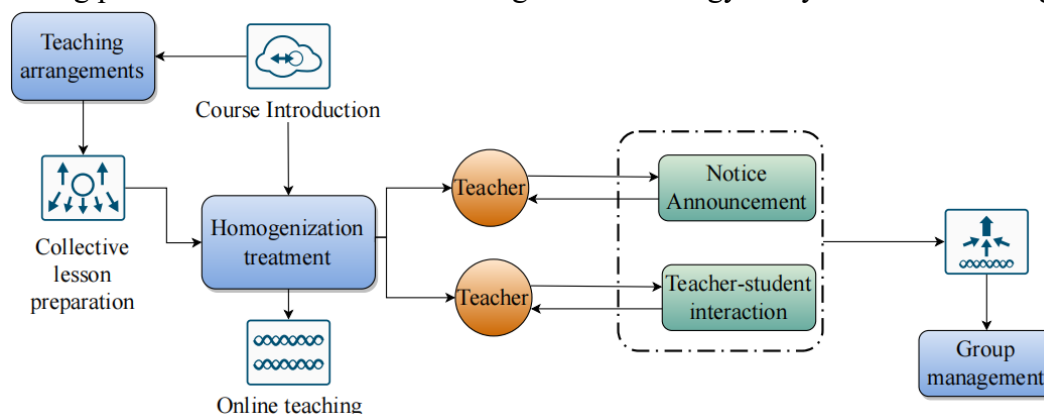

Figure 1 Operating System Course Teaching Platform

Teaching operating system courses through big data analysis technology can greatly stimulate students' interest in learning, and create a good learning atmosphere and team cooperation awareness. This not only improves students' business abilities, but also greatly benefits their overall abilities. Combining the ideological changes and characteristics of college students in the era of big data, economic globalization, and cultural diversity, focusing on social needs and students' attention, exploring the role of emerging media such in this case, the user only needs to store the data in the cloud, and the cloud is responsible for the specific storage strategy[8]. In line with the development of the era of big data, modern education reform has entered a new stage, and the field of modern education development will usher in an unprecedented great change. Therefore, the auxiliary function of education is one of the important tasks of the current teaching center, providing

objective basis for the implementation of educational and teaching activities, in order to maximize the function and value of educational and teaching activities[9].

2.2. Service management function

Management is the process of decision-making, planning, organization, implementation and control. Scientific management methods and strict management system are the most basic elements of management and the necessary prerequisite for management. Although big data has brought challenges to education, such as "one-to-one digital learning" has not been popularized, schools still need training in using data, and various student data formats need to be unifie. The space-time boundary and information gap in the educational environment can be broken, and the educational theories and laws that have been lurking under the data for a long time will become increasingly prominent and clear, and the training of talents will be more flexible and diverse [10]. Guided by scientific educational theory, in order to improve the quality of ideological and political education in colleges and universities and realize the fundamental task of cultivating people by virtue.

The "service" function of the current teaching center is reflected in all the work of the school. For example, the current teaching center should not only serve the decision-making of the college leaders, but also serve the teaching and scientific research, as well as the work, study and life of the teachers and students, and also undertake the services of various social training examinations in the college. Learning and life, education and society will no longer be isolated, students, schools and real life experience will be closer, and students' interest in learning and school-running motivation will be greatly stimulated. The objects served by all departments of the school, and the objects served by the current teaching center. The work undertaken by the current teaching center is actually the embodiment of its service function.

3. Analysis of Big Data on the Development of Modern Education

3.1. Fast and accurate analysis of teaching objects

Big data thinking brings us more than just these. Due to the fact that data comes more from society and daily life, we need to pay more attention to the data of students in their learning and life, pay attention to various practices in education and teaching, and timely and accurately predict the various needs of society for education. Transforming students' exploration spirit, developing their sense of self participation, and thus achieving their proactive development. The strategy of experiencing success requires teachers to clarify students' inner needs in order to find effective ways to motivate them. Management is the process of decision-making, planning, organization, implementation and control. Scientific management methods and strict management system are the most basic elements of management and the necessary prerequisite for management. Although big data has brought challenges to education, such as "one-to-one digital learning" has not been popularized, schools still need training in using data, and various student data formats need to be unifie. The space-time boundary and information gap in the educational environment can be broken, and the educational theories and laws that have been lurking under the data for a long time will become increasingly prominent and clear, and the training of talents will be more flexible and diverse. Compared with existing network technologies, the advantages of big data analysis technology for modern education technology are shown in Figure 2.

Guide students to set clear and scientific goals, so as to help students get a successful experience. Correctly handle students' psychological contusion and effectively maintain students' psychological balance. Ensure the intact rate of equipment, make equipment resources in a healthy working state, improve the utilization rate of equipment resources, and give full play to the role of modern educational technology equipment to meet various needs. In the era of big data, education departments and schools have easier access to data, and both internal stakeholders and external stakeholders can make maximum use of data to improve their work and learning efficiency. Therefore, the work of the current teaching center is complicated and diverse. In the face of all kinds of work, it is necessary to communicate and coordinate, and make reasonable arrangements,

so that every work can be carried out smoothly and maintain a sustainable development trend.
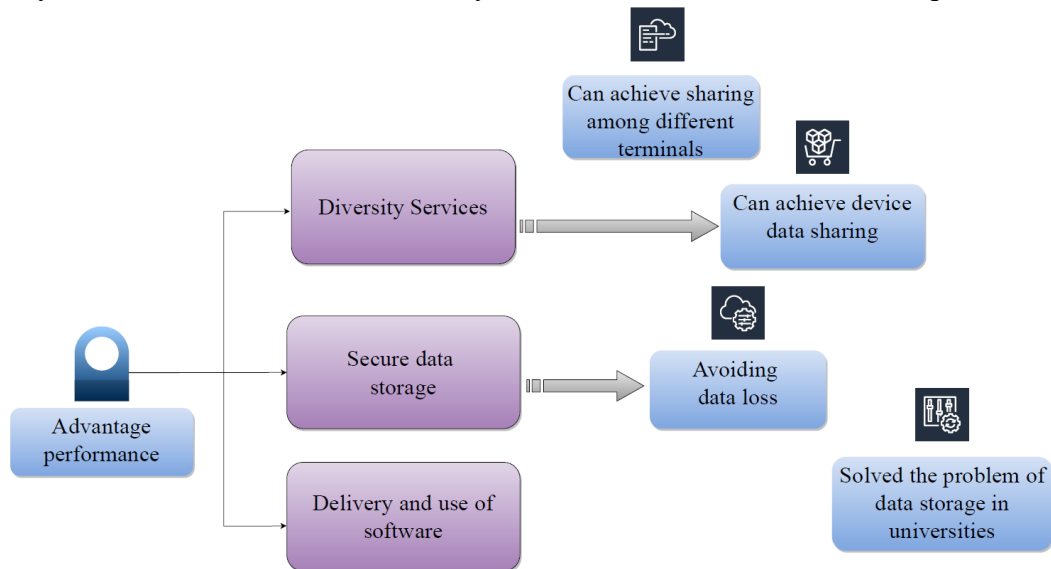

Figure 2 Advantages of Big Data Analysis Technology for Modern Education Technology

3.2. Comprehensive and flexible analysis of teaching content

With the rapid development of computer network technology, current education centers must strengthen information processing methods, establish efficient and integrated digital office systems in universities, and promote the development of higher education informatization. At present, China's education is facing a complex development environment characterized by fierce competition, diverse concepts, diverse and demanding demands. The lack and waste of education funds coexist, the scarcity and surplus of related talents coexist, and education flourishes but lacks momentum. In the field of education, influenced by traditional narrow thinking, some students deliberately conceal their own situation, some schools falsely report or refuse to open relevant data resources, some education departments procrastinate, and information data collection, organization, and disclosure lag, all of which can cause data fragmentation.

Teachers should protect the student information obtained through education, and students have the right to supervise the whereabouts of their own information data. Education researchers and managers should clarify the boundaries between exclusive and shared use, and make the fullest and effective use of data resources while ensuring data security and not infringing on students' rights. Data rules and regulations at all levels will enter various fields of education to ensure the improvement of educational efficiency and quality. In short, the construction of a new institutional and normative system centered on data management will lead a new round of reform in the education security system. Strengthen research on modern educational technology, explore the laws and trends of its development, and use the application of modern educational technology as a starting point to fundamentally improve work efficiency and achieve educational modernization.

4. Conclusions

Big data is the source to promote the development and innovation of education, and it is the driving force to realize the modernization of education in China. After students build learning situations on the original knowledge system, with more and more knowledge, they gradually plan new knowledge into learning situations. Every time they connect to the cloud, they can always find their own learning points in the first time, so as to start learning. Big data technology analyzes and summarizes the details of teachers' teaching process and students' class status, so as to find out the laws of teaching activities, make teachers adjust teaching contents and methods according to the feedback information, and better check and promote the teaching work. According to service management and other functions, clear job responsibilities and establish a strict post responsibility system. Pay attention to personal work at the same time, but also advocate the spirit of cooperation

and dedication, so that the division of posts within the department and even within the college is not separated, and the posts are divided, and the work should be cooperative. The work of each post and department needs mutual support and unity and cooperation. Education administrators must adjust their mentality, change their resistance, constantly improve their ability to resist stress and learn, and improve their data literacy. Scientific management methods and strict management system are the most basic elements of management and the necessary prerequisite for management.

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