

Thoughts on the Informatization of University Education Management Under the Background of Big Data Technology

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Abstract:

In recent years, the enrollment scale of colleges and universities in China has been expanding, while the education level has also been significantly improved, cultivating a large number of outstanding talents for all walks of life. However, in terms of education management, most colleges and universities are still at a low level, the informatization construction is lagging behind, and the integration of the “Internet plus” education field is not deep, which has greatly affected the modernization of colleges and universities. In the long run, as an important place for talent training, colleges and universities must actively promote information construction in the context of big data technology to speed up the pace of university modernization. This paper briefly describes the impact of big data technology on university education management, analyzes the current situation of university education management, and explores the path of efficient education management information construction under the background of big data technology.

Keywords:

Education Management, Big Data Technology, Promotion of Information Technology, Colleges and Universities

1. Introduction

The development and application of big data technology has had a profound impact on all industries and fields, and informatization has become an important development trend in all industries and fields. In this context, university education management must rapidly change management concepts, speed up informatization construction, and comprehensively improve the level of university education management by using big data technology to promote the construction of smart campus. The advantage of big data technology is that it can realize the analysis and processing of massive data. In the field of university education management, big data technology can collect data information related to students, analyze students' psychological characteristics, development status, and so on, so as to formulate targeted training plans, so that

students can get all-round training, and promote the comprehensive development of students.

2. The Impact of Big Data Technology on University Education Management

2.1. Help to accelerate the modernization of university education management

Colleges and universities are an important part of China's education system, bearing the heavy responsibility of training professional talents. With the development of society, various industries and fields have put forward higher requirements for talents, which objectively requires colleges and universities to speed up the construction of all aspects and further improve the level of education. The application of big data technology in university education management is not only highly consistent with the current trend of information development in the field of education, but also helps to further improve the university education management system, and plays an important role in the development of universities from "digital campus" to "smart campus". The modernization of colleges and universities is a long-term undertaking that needs to be promoted simultaneously from both software and hardware. The application of big data technology can make the means of college education management more modern and scientific, and can fully integrate the data and information resources of college education management, thus promoting the high-quality and high-level development of college education [1].

2.2. Help to improve the quality and efficiency of university education management

From the current situation of university education management, it involves many management contents, including students, teachers, curriculum, teaching assessment and teaching resource management; The data information involved is large and complex, including basic information of students, course data information, basic information of teachers, student activity data information, education resources information and assessment data information. [2] This leads to the further increase in the difficulty of university education management, and the difficulty in effectively improving the quality and efficiency of management. The application of big data technology can achieve the processing and analysis of massive data information, provide strong support for university education management, and make relevant management activities more targeted, targeted and scientific. In the long run, giving full play to the role of big data technology can greatly improve the quality and efficiency of university education management, which is of great significance for achieving high-quality development of universities. [3]

2.3. Helps to optimize the allocation of university education resources

Compared with primary school, junior high school and senior high school, colleges and universities have more education resources, including teachers, books, scientific research resources, curriculum resources and online education resources, which is an important basis for colleges and universities to cultivate excellent talents. However, in terms of the current development situation of colleges and universities, some colleges and universities have a low utilization rate of educational resources and fail to give full play to their advantages in educational resources. The application of big data technology can scientifically and reasonably allocate educational resources through scientific analysis and evaluation, so that college teachers, students, scientific research

teams, etc. can fully enjoy relevant educational resources. [4]At the same time, it can also use the Internet to realize the sharing of educational resources, which can benefit teachers and students of other colleges and universities as well as teachers and students of our university. By optimizing the allocation of educational resources in colleges and universities, we can fully tap the potential of colleges and universities and improve the utilization efficiency of educational resources. [5]

3. Analysis of the Current Situation of University Education Management

3.1. Low utilization rate of data information

Considering the current situation of education management in colleges and universities, there is a common problem of low utilization of data and information resources, which leads to the lack of strong data support for education management in colleges and universities. In the context of the current Internet era, colleges and universities are more convenient in collecting data and information, which has important reference value for college education management. However, due to the lack of a unified database and necessary data and information processing and analysis technology in colleges and universities, massive data resources are difficult to fully play their role and fail to achieve the expected results, This, to a large extent, also hinders the informatization construction process of colleges and universities. [6]

3.2. Lack of IT professionals

Big data technology, as one of the most representative modern technologies at present, although its advantages are obvious, it still needs a large number of professionals to participate in the specific application of college education management, otherwise it is difficult to play a corresponding role. However, most colleges and universities focus their main energy, funds and related resources on the construction of teachers' teams, campus software and hardware facilities, etc. They pay insufficient attention to the introduction and training of big data management talents, and lack the necessary resource input. Therefore, there is a general lack of professional big data technology talents, which leads to the long-term stagnation of the construction of education management informatization in colleges and universities, It is far behind the development process of other aspects of colleges and universities. [7]

3.3. Data information management is not standardized

Due to the different work contents and responsibilities of each functional department in colleges and universities, there are also obvious differences in information collection, management and processing, and the data and information between different functional departments are independent from each other, and data resource sharing has not yet been realized. The root cause lies in the lack of unified and standardized data collection and management, which leads to the fact that all functional departments only focus on the needs of their own departments in their specific work and fail to consider the problem from the perspective of the whole school. In addition, there are also many problems in information management, especially the insufficient protection of important information for students, teachers and the university, and the problem of information leakage, which has caused adverse consequences and to some extent affected the healthy development of universities. [8]

4. The Construction Path of University Education Management Informatization Under the Background of Big Data Technology

4.1. Build the data resource database of university education management

Building a university education management data resource database is an important way to promote the construction of university education management information. On the one hand, building a university education management data resource database can realize the unified collection and management of university education data information, including university curriculum information, teacher information, scientific research information, teaching and research information, student information and book information, which can all be included in the data resource database. In this way, information resources can be highly shared within colleges and universities, and all functional departments can obtain the required data information from the data resource database. On the other hand, based on the university education management data resource database, the data information can be filtered, analyzed and processed according to the needs of education management, providing strong data support for various management decisions and making various management activities targeted. In addition, colleges and universities can also open data resource databases to each other and share data information, so as to promote the development of teaching, research and scientific research work in colleges and universities and achieve collaborative development.

4.2. Strengthen the construction of professional talent team

The advantages and significance of using big data technology in university education management are self-evident. This is not only an inevitable requirement to promote the informatization construction of university education management, but also the only way to build a modern university. However, the application of big data technology must rely on professional talent team. Colleges and universities must strengthen the importance of the introduction and training of big data technology talents, properly tilt the funds and related resources, and comprehensively support the construction of talent team. On the one hand, colleges and universities should give full play to their own advantages, and combine their talent training plans to cultivate talents related to big data technology; On the other hand, we should actively introduce excellent talents from outside. Through a two-pronged approach, we can quickly establish a talent team with solid professional knowledge, excellent professional skills and high professional quality, so as to give full play to the advantages of big data technology, make full use of the data and information resources owned by colleges and universities, and ultimately serve the construction and development of colleges and universities themselves. [9]

4.3. Establish and improve data application and management specifications

In terms of establishing and improving the application and management specifications of university education management data resources, first of all, we should establish unified standards and specifications for data collection, classification and management based on the actual situation of each functional department of the university, so as to facilitate the entry into the university education data resource database for unified management. Secondly, it is necessary to establish a data information protection mechanism, especially when it comes to the private information of teachers and students, as well as the scientific research confidential

information of colleges and universities. It is necessary to clarify the corresponding confidentiality requirements to avoid adverse events of information disclosure. Finally, we should establish a data and information sharing mechanism to realize data and information sharing among functional departments, teachers and students, and between universities and colleges, so as to expand the application scope of university data and information. From the perspective of long-term development, the application of big data technology in university education management must rely on sound institutional norms, so universities should attach great importance to this aspect. [10]

5. Conclusions

To sum up, under the current background of big data technology, the necessity of informatization construction of university education management is further highlighted. Whether it is to cater to social development or promote the development of universities themselves, universities must attach great importance to the application of big data technology. Colleges and universities should actively build university education management data resource database, increase the construction of big data technology professionals, establish and improve the management and application specifications of education management data resources, promote the deep integration of big data technology and university education management, and effectively play the role of big data technology, so as to promote the overall improvement of university education management level, and cultivate more outstanding talents for all sectors of society, Fulfill the social functions of colleges and universities.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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