

The Practice of College Education Management Informatization Under the Big Data Thinking

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Abstract: In the current context, the application of big data concepts is more mature and extensive, which is also reflected in education management. It is an inevitable trend to conduct the informatization reform of college education innovations using big data-based solutions, and it is also a scientific choice for the reform and optimization of college education management. Practicing and exploring college education management informatization with big data thinking will improve the efficiency and quality of college education management and create a new pattern of college education management informatization. This paper mainly discusses the practical path of college education management informatization using big data to develop effective guidance and references for the innovation and implementation of college education.

1. Introduction

Education reform management is always synchronized with the reform of education and the advancement of the times. From the reform of rules and regulations to the optimization of students' status management and then to the construction of information management platforms, it can be seen that the college education management system in China has seen the gradual educational improvement. In the era of the knowledge economy, information values have attracted much attention, and the application of big data technology has become popular. In college education management, it is necessary to use big data technology to start the information reform of education management, data value mining by the effective use of data technology, and realize the improvement of the quality and efficiency of education management. Only by doing an excellent job in educational management can colleges achieve the goal of ideal educational management, realize high-quality education and cultivate high-quality talents. It is necessary to discuss the practical path of college education management informatization under big data thinking.

2. Connotation of Big Data Technology and the Application in Education Management

2.2 Connotation of big data technology

Big data technology originated in the United States and mainly refers to the information assets with solid insight and decision-making power in the Internet environment. Its main characteristics are authenticity, low-value density, diversity, high-speed and massive storage. At present, the definition of big data is not unified. Generally speaking, scholars at home and abroad define big data according to its internal characteristics and functions: a data system with huge data scales, diverse types, and fast production speed. Among them, the data scale is enormous, mainly referring to the wide range of data sources and diversity characteristics; variety means that the data information of big data has different codes and formats, and the attributes of each part are significantly different, and even difficult to identify; fast production speed means that users can quickly find accurate data by operating the extensive data system.

2.2 Application of big data technology in education management

At present, big data technology has many application advantages in college education management. For example, in the field of college teaching, relevant administrators can use big data technology to analyze the performance data of all students so as to measure the development of different departments, disciplines, and majors. Another example is the application of big data technology in the management system of colleges, which can effectively promote the informatization reform of education management, improve the informatization level of colleges, and give full play to its due technical utility. However, the promotion and popularization of big data need to be consistent with colleges' original school philosophy, teaching mode, and management mode. Otherwise, it is difficult to change the existing teaching management system. At present, although most colleges attach great importance to the information teaching, they do not fully excavate and analyze the data, so they cannot give use the big data effectively. For this situation, colleges can fully play their part only when the practical information is fully integrated and used.

3. Using Big Data in College Education Management Practice

3.1 Instilling the novelties of conventional education practice

At present, the educational management in Chinese colleges has been improved, and the fit degree with the extensive data background is becoming higher and higher. College education management mainly includes teacher management, student management, teaching scheme management, curriculum arrangement management, and teaching quality management. With the support of big data technology, the application functions of these modules become more perfect, diversified, and intelligent. Users can complete the system online teaching reservation, teaching data statistics, information search of teachers and students, and the release and update of new information. Under the background of big data, colleges should further clarify the future development direction and skillfully integrate big data technology into the education management system to make a modest contribution to the excellent development of higher education in China.

3.2 Accurately grasp the behavior of college students

For college students who are at a critical turning point in their lives, their life concepts, values, and moral concepts are not mature. Due to the lack of life experience, their cognitive and behavior have shown different degrees of instability. Through the practical application of big data technology, educators can timely obtain the psychological state, behavioral characteristics, ideological connotation, and political remarks of college students to find problems and formulate ways to solve problems for the first time. It can be seen that under the background of big data, the informatization construction of college education management is not only to adapt to the times but also to highlight the leading position of students and lay a foundation for its stable development in the future.

4. Big Data based Practice Path of College Education Management Informatization

4.1 Establish the correct concept of extensive data technology application

Only by establishing big data consciousness can educators promote big data based educational novelties. First, education management staff should realize that college data are the college education resource. Focusing on the accumulation of historical data in colleges, constantly producing real-time data, collecting real-time data, combining college data with external industry data, and analyzing data with big data can promote the advantages of college education management system education, improve the core competitiveness of colleges, and explore the direction of the future development of colleges. Second, it needs to update the thinking of student education and management. The application of big data technology to the college education management work is not only to supplement the traditional student education management work or reform the education management mechanism, but to change the education management thinking on a macro level and promote the formation of analytical thinking

and comprehensive thinking. Finally, the application of big data technology should pay attention to methods, not just simple data analysis. The big data technology and related procedures should be used to innovate college education management work so that the education management system and data within the school can be fully circulated, the connection between student education management data and relevant data inside and outside the school can be effectively analyzed, and the application value of college talents can be understood.

4.2 Strengthen big data based educational platform

It is necessary to make good use of big data technology to establish a platform for the total factor circulation of data. Such a big data platform can offer data access and storage, management, and analysis functions for the data system. Only by further developing big data platforms and promoting the construction of big data platforms can the advantages of the significant data era be reflected. It is impossible to use independent data or incomplete data platforms as a tool to build big data exchange platforms; therefore, it needs to make big data exchange platforms and data processing platforms of colleges, so as to lay a foundation big data-based technology implementation.

4.3 Solve the problem of poor departmental data sharing

The administrative institutions in colleges exercise their respective functions, and the data between departments cannot be shared and fused. During applying big data concepts to update the college education management work, this is a significant mechanism obstacle. Only by promoting the information sharing and integration between various departments within the college can the application of big data technology be guaranteed. College administrators should pay attention to the reform and give the necessary support to the reform of education management. In order to promote the information development of education management work, it is essential to unify the standards and encourage the sharing and unification of information. In the era of big data, it is necessary to integrate all student information into a system for analysis and processing, promote the integration of information processing functions of various departments improve the quality of education management work.

4.4 Improve the data integration mechanism inside and outside the college

Integrating the internal data of colleges and the data of all sectors of society is another key to promoting the big data-based education management of colleges. Colleges are not a closed social system. There is a saying that "colleges are a microcosm of society". Because of this, colleges cannot develop independently from society, and colleges have a direct relationship with economic and social development. The development of external data of colleges, and the collection and analysis of social data related to students should be put in an essential position so that the core competitiveness of college education management work can be improved to play a more excellent value. Colleges should establish an external data collection and processing mechanism, select a college information integration platform with the help of big data technology, and make college student management work better serve students through the integration of internal data and social industry data.

4.5 Establish a professional big data technology management team

Applying big data technology to college education management is not a simple thing. The construction of a big data platform needs professionals' support, and the implementation of each link also requires the participation of professional and technical personnel. Therefore, colleges should pay attention to the construction of the big data technology application team and make professionals who know technology, management, and leadership become members of the big data platform construction team, so that colleges can make efficient use of big data technology.

5. Summary

With the opportunity of big data based educational reform, colleges should actively take the road of informatization reform of educational management, and launch more accurate management

decisions with the informatization reform of education management. With the classification standards, the compilation of standardized educational information and be cooperated with the highly shared information system platform, so that colleges can realize the integration of internal information, the strengthening of target management, the extension of management tentacles, and the positive response to risk prevention. The good circulation of the college education management information system can improve the effectiveness and quality of education management, and better serve the education work of colleges.

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