

Explore the Influence of Big Data on Chinese University Education Management and Countermeasures

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Abstract:

Big data is one of the most prominent features of the current era. It has been deeply and widely applied in all aspects of society, especially in the field of higher education, which has promoted profound changes in the field of higher education. In view of the current situation of the management of higher education, the influence of the big data on it mainly focuses on two aspects, one is the influence on the educational activities of higher education; Second, the impact on the function of institutions of higher learning. Based on this, this paper briefly expounds the big data, analyzes the influence of the big data on our university education management, and puts forward countermeasures for our university education management under the background of the big data era..

Keywords:

Educational Management, Big Data, Influence

1. Introduction

Development strategy Big data in the narrow sense mainly refers to massive data information; The broad sense of big data generally refers to big data technology system, large number awareness and other content. In recent years, with the wide application of big data in various industries, it has triggered a new round of revolution, and higher education is bound to be affected in many aspects during this revolution. As for colleges and universities, in this reform, they should not only be producers and consumers of data information, but also users of data information. By digging deeply into the value of data information, they should promote the reform and innovation of education management in colleges and universities, and at the same time provide strong technical support for education management in colleges and universities.

2. Connotation of Big Data

The connotation of big data can be explained from three dimensions, namely, data set, data thinking and data technology. From the dimension of data set, big data is a data set containing massive data information, which is characterized by diversity,

complexity and relevance, mainly due to the complex sources of data. In the aspect of data similarity, it can be structured data, semi-structured data and unstructured data. From the dimension of data thinking, big data is a kind of thinking or concept. In the book *The Age of Big Data*, big data is considered as a kind of world view, a quantitative world view that “the essence of the world is data”. From the dimension of data technology, it mainly refers to the technical means to obtain valuable information from massive data information, including data storage technology, data processing technology, data analysis technology and data mining technology. Data mining technology and data analysis technology are mainly used in the field of higher education. From the essence of big data, it is a kind of technical means to solve practical problems, its role mainly depends on people's control and utilization of data information, among which the application of massive data information of technical means is an important basis; Technical means is the realistic way to achieve the goal of data information utilization; Data thinking is the value connotation of big data. [1]

3. The Influence of Big Data on Chinese Higher Education Management

The influence of big data on university education management is multi-level and multifaceted, with both direct and indirect influences, which are mainly reflected in the following aspects: First, the impact on teaching design. Big data analyzes learners' learning style, learning attitude, cognitive rules, learning behavior, learning history and learning difficulty, and uses decision tree model or cluster analysis model to depict learners' portraits and specifically describe their characteristics, which enables accurate and objective reference information to be obtained in the process of instructional design. [2] It is convenient for teachers to adjust the teaching design according to the characteristics of learners to design a feasible teaching program. The second is the impact of big data on the development of teaching media. Using big data as the technical basis for developing teaching media, data mining and analysis technology can build independent, open and He Xinghua's education and teaching media, so as to provide a good environment for the teaching process. Third, the impact of big data on educational technology. In the information age, all educational activities will generate a large amount of data information, which will be continuously collected and eventually form big data, and this massive data information can be used in educational activities. [3] However, how to apply the massive educational data information has become a new problem, which requires that educational technology must be changed, and big data technology should be applied in educational activities to realize the processing and analysis of massive data. Fourth, the impact of big data on teaching management. The most prominent impact of big data on teaching management is that the controllability and accessibility of information in management decision-making are significantly enhanced. The application of big data technology can enable managers to quickly and accurately obtain the corresponding information, so as to take it as an important reference for decision-making and make decision-making behaviors conducive to the improvement of teaching management level. [4]

4. The Development Strategy of Chinese University Education Management Under the Background of Big Data Era

4.1. Correctly understand and apply big data in education management

As one of the core technologies that trigger the current social change, big data technology has far-reaching influence, but it is also a kind of technology in essence, with the feature of tool. Correct understanding and reasonable use of this tool is the key to give full play to its role. As educational administrators in colleges and universities, they should first fully and correctly understand the role and value of big data, which is conducive to keeping rationality under the tide of big data, and then selectively use big data in educational management practice, so as to give full play to its role. Although big data technology is the best means to solve many problems at present, it is not a unique solution. [5] Therefore, the key to fully and correctly understand big data is to realize the limited characteristics of big data, which is conducive to college education administrators to make rational judgments. For example, in a simple closed system, causal analysis of small data can complete the corresponding task without the need to collect a large amount of data information. Although big data solutions are more efficient, it is obviously not necessary from the perspective of cost and applicability. From the perspective of managers, seeking the optimal solution is not the highest goal, but the most applicable solution. Therefore, only by correctly understanding big data can college education managers correctly use big data in education management practice. [6]

4.2. Integrate data resources and build application platforms

In terms of the current information system built by colleges and universities, with a certain amount of data analysis and processing capacity, but relatively limited, mainly due to the lack of processing capacity for complex data and unstructured data, at the same time, in terms of related hardware facilities, there is an urgent need to upgrade. Therefore, the integration of data and information resources in colleges and universities, the improvement of software and hardware facilities, the construction of data and information application platforms, and the opening up of big data and Internet of Things and other interconnection paths are issues that need to be attached great importance to in the education management of colleges and universities. First of all, colleges and universities should integrate the data resources of the original information system effectively, and at the same time collect the data resources related to teachers and students uniformly and send them to professionals for processing, so as to realize the integration of data and information in a large range. On this basis, the data analysis application platform is rebuilt, covering data collection, storage, transmission, analysis and processing and other functions, laying a good foundation for the application of big data. Secondly, it is necessary to explore the application of big data in online education. By referring to the online education experience of relevant foreign universities and domestic online education development experience, online courses are launched based on the big data platform to enrich the educational channels of colleges and universities. [7]

4.3. Establish and improve big data usage norms

Although the advanced nature and superiority of big data technology are significant, there are also some problems in the use process, among which the most prominent is the security problem, especially in the industry closely related to personal information. In the field of higher education, due to the openness of colleges and universities, the security of big data cannot be ignored. Although there has been no privacy violation problem, there are also fierce ethical debates in the academic circle. This is the hidden danger of data security that cannot be ignored, which requires colleges and

universities to establish and improve the use of big data norms. Regarding the establishment of a user-controllable mechanism for the use and protection of privacy information, you can refer to the current domestic and foreign commercial privacy protection models. At present, the more widely used method is that users themselves master and control when, where and by what means private information is obtained and used, and when it is saved or destroyed. In combination with their own actual situation, colleges and universities have established big data use standards based on this method, so as to eliminate big data security risks. [7]

4.4. Attach importance to the training of big data talents

Big data, as one of the emerging technologies, has high requirements for majors, especially in the analysis and processing of big data, which is difficult to master due to its high complexity. On the other hand, there are few talents with high information literacy who can master and apply big data technology, which limits the promotion and application of big data in college education management to a large extent. Therefore, in the future development process, colleges and universities must attach great importance to the training of big data talents and continuously improve the professional level of talent teams. [9] First of all, in the aspect of big data talent training, colleges and universities can give full play to their own advantages and incorporate big data into the professional setting and curriculum system, so as to cultivate outstanding talents in the application and management of big data. This can not only solve the problem of the shortage of talents in colleges and universities, but also export talents needed by the society. Secondly, in the construction of big data talent team, colleges and universities should change their thinking. On the basis of attaching importance to the training of existing talent team, they should also strengthen the training of teachers and students of relevant majors, improve their big data application ability and train their big data thinking, so as to strengthen the talent reserve. In addition, colleges and universities can organize relevant experts and professors to form a team of big data experts, who are mainly responsible for theoretical research and technological breakthroughs of big data, and apply the research results in educational management practice, and even promote them to the whole society. [10]

5. Conclusions

To sum up, under the background of the era of big data, massive data information and various cutting-edge technologies are coming one after another, which has a profound impact on all fields of society. Higher education is in the midst of this great change and must pay attention to change and innovation, so as to realize new development through the wave of big data. As educational administrators in colleges and universities, they must fully and correctly understand big data and make reasonable use of it. At the same time, they should actively build big data application platforms, attach importance to the training of big data talents, and establish and improve the standards for the use of big data. Only in this way can the educational management level of colleges and universities be further improved under the background of the era of big data and better serve the overall development 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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