The application and practice of big data technology in promoting the modernization of university governance ability

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Abstract: *With the continuous progress of science and technology, China's higher education is also developing continuously. Looking back at the long river of history, universities have always been the cradle of cultivating excellent talents from all walks of life, and also the leader of China's scientific and technological invention and creation. Therefore, this paper will discuss the application and practice of big data technology in promoting the modernization of university governance capacity, and provide some help for the development of colleges and universities.*

Keywords: *big data technology; university governance; application practice*

1. Introduction

In the context of the era of big data, the application of technology can make the education management more easy and convenient for schools, and save a lot of human and material resources. On the one hand, it facilitates the communication and learning between schools, and also facilitates the communication between schools and students. But on the other hand, the advent of big data technology also urges universities to make new audit for their own management mode, and then innovate the education governance system. Through the following discussion, the significance of big data to the modernization of university governance is discussed.

2. The role of big data technology in promoting the modernization of university governance

2.1 Big data technology controls the dynamics of students' thoughts and behavior

University administrators should observe the students' thought and behavior state in time, which is also their responsibility and obligation, to ensure that the students grow up in a healthy learning environment. But, in actual education management, a few education management personnel often more time and energy in education scientific research respect, lack the important consciousness of control student thought behavior state, this makes the student lack timely guidance when thought behavior occurs abnormal. However, this neglect behavior can be improved in the application of big technology. Colleges and universities can accurately strengthen the big data awareness of education managers through the relevant lectures of big data technology, so that they can make full use of the advantages of big data to accurately control the students' thought and behavior state, so as to ensure the mental health of students. The implementation of big data technology in university governance has a significance of The Times. It can perceive the social forms, smooth the communication channels teachers and students, and provide a guarantee for the health of students. Therefore, big data can give the establishment of education governance mechanism system, stimulate the new vitality of colleges and universities governance, complete the sharing of education subjects, is the endogenous condition [1] to build a socialist school with Chinese characteristics and control the ideological state of students.

"Cultivating people by virtue" is the ultimate goal of higher education. In the complex social environment, it is difficult for traditional teaching methods to accurately complete "teaching students in accordance with their aptitude". Using digital technology in higher education can protect students 'privacy and pay attention to students' behavior according to law. The use of big data can provide technical support for the teaching of managers and teachers, accurately understand that students of

different grades and majors, can carry out targeted education work on specific problems, and formulate perfect education plans to help students solve the learning difficulties, so as to achieve the educational goal of "educating people and become talents". Big data can be used to implement humanized "invisible funding", which can accurately identify students from poor families, and then help schools to complete accurate education work. Colleges and universities can find out students 'comprehensive scores and attendance times according to the analysis of big data, and guide students' daily life and study completion according to the data information, which is helpful for educators to implement fine management.

2.2 Big data technology to carry out personalized education and learning

The establishment of digital campus can transform the learning style of college students. At present, the phenomenon of truancy often occurs in the study and life of college students, and the application of big data technology can change this situation. College education administrators can make full use of the relevant data of big data, collect and sort out the learning data of different students, and mine the hidden rules in the data, so as to further adjust the education management policy and system, and truly achieve the educational thought of teaching students in accordance with their aptitude and individual management. Big data technology is also a means of continuously innovating the modernization of university management. Therefore, the leading cadres in the new era should keep up with the strategic pace of national education, cater to the new concept of education governance, and fully cite the digital thought to promote the modernization of university governance. Colleges and universities should change their educational concepts, change the traditional governance thought into the new concept of digital precision governance, strengthen the new ideas of college educators and students, and complete the digital [2] of university governance through continuous innovation.

We should make good use of big data technology to fundamentally solve the problem of educational evaluation. Educational evaluation is an important link of higher education. The teaching evaluation of higher education should directly point out the key problems and accurately evaluate the teaching and scientific research situation. Through the use of big data, the factors affecting teaching can be mined, and the characteristics of different disciplines, so as to find an evaluation system suitable for teaching and solve the difficult problems in teaching. It is necessary to use text technology and knowledge analysis technology to analyze the scientific research results to ensure that their research has innovative ideas. Nowadays, there is a special evaluation system in the expert scoring and academic discussion, through which the experts can accurately analyze the scientific research problems and find solutions. In the process of developing and establishing a new set of data evaluation system, we should give full play to the advantages of big data, analyze the teaching courses between different disciplines and majors, find the characteristics of data, and develop a comprehensive scientific research evaluation system suitable for all disciplines and teachers, so as to realize the accurate evaluation of teaching.

3. The application and practice of big data technology in university management

3.1 Build an education management data platform

In the application of big data to the governance of colleges and universities, the collection and collation of data should be completed, so as to have the related technologies of big data used smoothly. At present, many colleges and universities have established small-scale education management systems, but the two are relatively separate, and can only be used in a small scope, and can not fully complete the integration of data work. So, colleges and universities must establish large data institutions, the students 'learning information and state of thought collected to special education data management system, built a wide range of information database, ensure that education management can obtain and update student data, effective use of data information, and fully understand the students' study and life. In addition, schools should build their own education platform, so that they can develop their own education management system according to the characteristics of students, to ensure that the management methods are scientific and reasonable. When building the business model, it is necessary to pay full attention to the data of schools, teachers and students, grasp their dynamics, and timely feedback the abnormal information to the management system, so as to complete the support and control of data monitoring. Data analysis should divide the teachers and students of each grade to obtain the authority to fully analyze the specific management and tracking management. Through the use of the management platform, the student examination data can be monitored, the evaluation and

analysis of students' performance can be completed, and then special methods can be adopted to strengthen the teaching effect and improve the modern education management indicators.

The school big data management system is constructed, which can implement the data analysis and statistics of the situation of schools in the whole province, and complete the monitoring of school property analysis, school operation and students' thought and behavior status. The teaching process and the data collection work reviewed by students have a lot of research value. It can analyze users and hardware and software equipment with the application of people and things, and can plan the campus data system completely. Through the completion of teacher data portrait to help managers understand teachers, apply big data technology to the management and training of teachers, can build a data system of staff, but also can master the basic information of the whole school staff. Accurate evaluation for teachers can provide scientific methods for teachers' teaching, and then improve their teaching efficiency. Collecting the information of teachers and students in each school can accurately complete the management, store the education and teaching information according to the data format, and complete the construction of education management system. Based on the data center and the management platform, the data extraction, collation and transformation work can be completed. According to the governance requirements, the extracted relevant data can be put into the database, and the data can be analyzed out of the warehouse to obtain the management authority. Data analysis software can use middleware to complete data sharing and statistical integration technology, so as to ensure the smooth development of the management work of colleges and universities. In data application, the use of client software should be used to complete decision support. Big data technology can visualize educational management work, which can provide support for management decision-making and make decisions more scientific and reasonable. In data review, the accuracy of data can promote the comprehensive development of education and provide a guarantee for education management [3].

3.2 Build a high-level management team

Building a high-level management team can provide a guarantee for the application of big data. In the thinking concept of big data, university management can explore the value of data when applying its technology, and analyze who has the ability of big data analysis and management. But among the university administrators, very few people have both these two abilities. Therefore, colleges and universities should give full play to the advantages of big data technology, strengthen their own management work, find managers with big data analysis ability, and pay attention to students' behavior from the perspective of ideas. Collect and sort out students' data, and also understand the data of the education management platform from the aspect of ability. It is necessary to cultivate a management team with innovative consciousness and innovative spirit. Educational administration management should have relevant practical experience. Therefore, managers should go into the classroom, observe students, accurately grasp the teaching problems, and timely integrate and analyze information after understanding various factors. In the specific content of research management, the problems encountered can be transformed into teaching content and practical experience into theoretical knowledge, so that teaching activities become scientific and vivid. The educational administration work should also be transformed according to the content of the education reform, which also poses new challenges to the managers. In order to adapt to this situation, the educational administrators should change their traditional thoughts to ensure the smooth operation of the management work. Colleges and universities should also encourage and guide managers to give full play to their innovation ability, complete the change of traditional ideas, and actively use advanced management methods to improve the quality of management. It is necessary to complete the establishment of the assessment mechanism to stimulate the enthusiasm of the educational administrators. First of all, to understand the establishment of a perfect management mechanism, in essence, is for the management of personnel. Therefore, the management personnel should unify the management thought, to avoid in the management work can not lead to the work can not be carried out smoothly. Strengthening the management personnel's attention to the grass-roots work can make the management work be fully constructed. Secondly, a scientific and reasonable management plan should be formulated to mobilize the work enthusiasm of the management personnel. In the process of work, it is necessary to pay attention to the rules and regulations of management work, and implement the elimination system for managers who lack ambition and subjective initiative, so as to ensure the efficiency of the management team.

In the construction of high-level management team, it is an important basis for talent introduction and training. The objective and fair evaluation of talents has a good directional effect on the formation

of talent team. If this link is not adopted, it will not only mobilize the enthusiasm of the talent work, but also cause a bad impact to a certain extent. Nowadays, colleges and universities have completed the talent selection with the publication of the articles, and this selection method has been ridiculed by most people, and it does not play the due role of evaluation. The key to this problem is that the information of evaluation is less, and the real data information is not complete, which makes the lack of scientific evaluation with both integrity and ability in the data measurement. Talents are diverse, but the real selection criteria are often moral cultivation and responsibility selection. The current academic problem is the integrity of talents and academic corruption, so we should appeal to the society to strengthen the selection of "virtue" of talents. The use of big data can reduce people's prejudice, change people's conformist ideas, and then achieve breakthroughs in scientific research and technology, and also bring some hope for the solution of difficult problems.

Although big data technology has not been used in China for long, the research and application of big data is imperative. Its thinking mode and scientific and reasonable talent evaluation system are more suitable for the current governance process of universities. In addition, the government should also pay more attention to the selection of talent team, and then establish a high-level management team.

3.3 Improve the standards for the use of big data

The premise of improving the big data use technology is to complete the data collection. Students' data and information is huge, complex, and distributed in various departments. Therefore, in the process of data collection, it is not conducive to the integration and analysis of the next link, and it cannot maximize the value of the data. The widespread use of big data technology is easy to lead to the disclosure of students' information, which threatens the life and health safety of students. In view of this situation, relevant management systems should be formulated when applying the big data technology, to ensure the smooth connection of data from relevant departments, and to complete the data collection and analysis work. In addition, it is necessary to stipulate the use authority of data collection, so as to fundamentally ensure the data security. Perfect the school information equipment, which is an important link for the school to complete the information management. When using big data technology, colleges and universities should grasp the details to change and complete the terminal and network construction of the management platform. Big data can be used to collect students' study and life information, improve the database, to ensure that the management work is implemented. Colleges and universities should establish relevant school regulations and stipulate the use of big data related guidelines to ensure that big data technology will not be infringed by security when used.

4. Conclusion

To sum up, big data technology plays an important role in the management of colleges and universities, and in a long time, the management of colleges and universities will inevitably take this as an innovation path for self-improvement. It is necessary to adhere to the concept of combining multiple cooperation and scientific decision-making, and then establish a new ecology of digital technology to promote the modernization of university management.

Colleges and universities should pay more attention to the following points in the process of using big data technology to promote the modernization of governance capacity: Firstly, the educational concept should be changed. Colleges and universities should establish new ideas of digital governance of "flat and precise" digital governance, strengthen the cultivation of digital consciousness and ability of university administrators and teachers and students, and constantly innovate the governance mode, so as to realize the integration of "knowledge, action and innovation" in the governance process of colleges and universities. Secondly, reorganize the elements and modes of education to realize the systematic reform of the key elements of education governance. Relying on new technologies such as artificial intelligence, big data and cloud computing, through structural restructuring, process reengineering, data integration, teaching and evaluation mode reform, the digital transformation of all elements, all processes, all business and all fields in education governance will be realized. Thirdly, build a new system of smart education services, and promote the integration of "5G + cloud network" with the goal of "Internet of things, data connection and intelligent intelligence". We will continue to build new infrastructure facilities such as information networks, platform systems, digital resources, smart campuses, innovative applications, and trusted security, and build a smart education service system featuring data integration and integration. Fourthly, give full play to the efficiency of big data in

education to achieve "data endorsement". In the new era, education governance should actively rely on education big data to build an evaluation and decision analysis system supported by data to meet the needs of personalized service; break data barriers, eliminate information islands, promote cross-departmental, cross-field and cross-level linkage, realize collaborative and scientific governance, create precise and scientific governance new mode, and improve the modernization efficiency of education governance through digitalization.

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