

Research on the Informationization Management and Practice Path of Higher Education Teaching under the Background of Big Data

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Abstract: In the era of big data, the development of informationization in higher education management has undergone some changes. In the new situation, how to promote the better development of informationization in higher education management has become a key issue that relevant personnel need to think about. The article is based on the current situation of information technology development in higher education management in the era of big data, and mainly analyzes the path of innovative development of information technology in higher education management. Universities and related educators should strengthen their awareness of big data application, enhance their efforts in big data application, and optimize measures for integrating internal and external information to achieve innovation in the path of information technology in higher education management in the big data environment, to improve the effectiveness of information technology work in higher education management.

Keywords: Informationization Management, Practice Path, Big Data

1. INTRODUCTION

In today's increasingly deepening education system reform, the achievements of information technology construction in universities are becoming increasingly rich. In the era of big data, the informatization of university education management has become an important direction for reform. The use of diverse information system software to assist educational management work, promote the effective development of scientific research, and provide great opportunities for the development of higher education. Applying big data technology to university education management requires university management personnel to overcome technical difficulties and discover the relationship between big data technology and student management work.

At present, there are still several problems in the informationization reform of higher education management in the era of big data. The application of big data technology in universities to achieve educational management informatization can improve the quality of educational information management, enhance the teaching quality and efficiency of teachers, and optimize the daily management methods of students. University administrative personnel use big data technology for teaching management, which can effectively analyze student grades, constantly weigh the professional situation of relevant departments, and understand the development status of different schools and students. Applying big data to the management system of universities can not only promote the informatization reform of education management, but also improve the quality of talent cultivation in universities.

Due to the need to combine the promotion of big data with the educational philosophy and methods of universities, teachers must constantly understand big data and innovate the existing education and teaching management system to better play its role. Therefore, the comprehensive literacy of teachers can be improved. Data is an important resource in the development of schools. The more information students have, the more universities must improve their own effective ways of obtaining information according to their needs. Most

universities attach great importance to the construction of information systems and educational equipment, but have not carefully explored, analyzed, and integrated the data, and implemented reasonable utilization. In addition to rational utilization and mining, effective information should also be effectively combined with scientific management.

In the era of big data, to meet the needs of teachers and students, it is necessary to fundamentally change the traditional education management model. Every educator needs to gradually establish a mindset of big data in their actual work. By analyzing data, scientific and reasonable decisions can be made, thereby achieving the goal of democratic data management, and promoting educational reform. The integration of information management among students in various majors is difficult. The management of higher education may seem like a simple activity in the field of education, but it is closely related to social and economic development as well as the future employment of students. The education management work in universities is related to the future development of students, and the various industries chosen by students will be closely related to the content of education management work.

2. THE PROPOSED METHODOLOGY

2.1 Innovation and Development of Informationization in Higher Education Management in the Era of Big Data

Universities are important places for cultivating social talents. Obtaining necessary socio-economic data and integrating it with student personal information data is essential to understand the future development trends of higher education. This is also the advantage of applying big data technology in university education management. In the process of educational management practice, various management departments in universities should promote data sharing and integration among departments while fully exerting their own functions.

Universities should establish data and information classification standards, and based on continuously coordinating education and teaching management, organize and classify the collected data and information. Secondly, universities should establish corresponding data platform systems, linking different majors and their corresponding functions together to form a unified big data system. Thirdly, universities should establish a complete feedback mechanism, so that once problems are found in the database, they can be promptly resolved through this feedback mechanism. Big data aims to meet the needs of teachers and students and completely change the traditional education management model.

Every educational work should gradually establish a mindset of big data, analyze data before making scientific and reasonable decisions, achieve democratization of data management, and promote education and teaching reform. In traditional design of teaching scenarios and collection of teaching information, general decision-making mainly relies on educational experience. However, based on the construction of big data, teaching experience and management are no longer the dominant factors in teaching. Student opinion data will also become a major factor. Through analysis and integration, the best teaching methods can be obtained, and actual data can be used to help carry out teaching activities, to achieve the goal of teaching students according to their aptitude.

From the perspective of the overall development of schools, understanding the essence of big data, emphasizing the informatization reform of education, rebuilding communication and sharing platforms, helping to implement data transparency and democratization of decision-making, meeting the public's demand for data, creating an information port for effective data, and improving school management, and helping to enhance the reputation of schools. The main purpose of big data is to teach people how to handle corresponding data problems, to identify the root cause of the problem and the root cause of the problem, it is necessary to thoroughly solve the problem.

In traditional management models, the integrity and coherence of data are not possessed, and this phenomenon mainly results in one-sided and subjective decision-making. However, the use of big data can effectively solve this problem through democratic methods. Replacing traditional and unreasonable management models with new ones can further innovate reforms. Education managers should recognize that university data is the same as university educational resources. Pay attention to the accumulation of historical data in universities, continuously generate real-time data, collect real-time data, combine internal data with external industry data, use big data technology to analyze and mine, to promote the educational advantages of university education management systems, improve the core competitiveness of universities, and discover the future development direction of universities.

2.2 Exploring the Innovation Path of Informationization in Higher Education Management in the Big Data Environment

Only by recognizing that data is a resource can we promote the application of big data technology. In response to the current difficulties in collecting social data in universities, government departments should organically combine social data information with university information based on actual situations. Firstly, in the process of data collection, the education department should collaborate with relevant market

departments to collect enterprise data and use line graph analysis to grasp the relevant situations of different enterprises in the process of economic growth. Secondly, relevant departments can unite relevant enterprises in the market according to the development needs of different industries, strengthen cooperation, and organize the data generated during the cooperation process, then conduct corresponding data analysis, and use hierarchical theory to construct an industrial development information database.

Big data is meant to teach people how to handle data problems, to investigate the root causes of problems, and to achieve fundamental solutions to problems. In traditional management models, data is incomplete and incoherent, resulting in partial decision-making bias and supervision. The use of big data needs to overcome this deficiency and adopt democratic means to achieve solutions. Using new management models to replace traditional unsuitable management models, while carrying out innovative reforms. The decision-making of universities is to some extent influenced by the interests and wishes of everyone in the school. Therefore, universities can vigorously promote humanized management methods, and use scientific predictive decision-making to reasonably position the needs of teachers and students and implement refined management.

For big data technology universities, they need to continuously increase their use and promotion efforts, to establish a data-based education management model. The data support for business intelligence technology is mainly provided by managers, and this technology is generally used in enterprises, but it is not currently applied in universities. However, from a certain perspective, this technology can be widely applied in the informatization reform of university management. Such a big data platform can provide unified data access and storage, management and analysis, calculation, and cleaning functions for data systems. Only by deepening the development of big data platforms and promoting their construction can the advantages of the big data era be reflected.

The application of big data technology in the management process of university students cannot use independent data or incomplete data platforms as tools. It is necessary to build a big data communication platform and data processing platform as much as possible to lay the foundation for the application of big data technology. Universities can establish basic data management platforms based on the corresponding data in the development process of social industries, and form research teams to address the difficulties faced by enterprises, carry out scientific research exploration and build a complete talent training program. In addition, universities can also establish an external data collection and analysis mechanism based on the problems existing in the education and teaching management process, forming a data information system that is more in line with their own management characteristics, laying the foundation for better building a data-driven information platform.

3. CONCLUSION

The application of big data technology in educational work has become an inevitable direction of educational reform. University administrators should seize the opportunities of the times, keep up with the times, and actively apply big data technology to promote the informatization of student education management. In the context of big data technology, actively promoting innovation in educational concepts and student education management mechanisms, universities and

related educators should strengthen their awareness of big data application, enhance the strength of big data application, optimize internal and external information integration measures, and carry out corresponding work to achieve innovation in the informationization path of university education management in the big data environment, thereby improving the effectiveness of university education management informationization work, To achieve sustainable development and cultivate more high-quality talents for society.

4. REFERENCES

- [1] Yang Jun. Research on the Innovation Path of Informatization in Higher Education Management under the Background of Big Data - Review of "Research on Higher Education Management Based on Big Data" [J]. Scientific Research Management, 2020, 41 (10): 1
- [2] Zhou Nanping, Jia Jia. Research on the Path of Informatization Construction in Universities under the Background of Big Data [J]. China Electronic Education, 2018 (9): 6
- [3] Zhou Nanping and Jia Jia. Research on the Path of Informatization Construction in Universities under the Background of Big Data [J]. China Electronic Education, 2018 (9): 75-80
- [4] Li Chong. Issues and Paths of Informationization Construction in Higher Education Teaching Management under the Background of Big Data [J]. Teacher, 2020 (5): 2
- [5] Hu Rong. Research on the Innovation Path of Informationization in Higher Education Management under the Background of Big Data [J]. Food Research and Development, 2021 (17)
- [6] Yu Binbin. Exploration of Innovation and Development of Informationization in Higher Education Teaching Management under the Background of Big Data [J]. East West North South, 2020, No.559 (11): 171-172
- [7] Huang Tianyun. The Path of Informationization in Higher Education Management under the Big Data Environment [C]//Compilation of Scientific Research Achievements in the 13th Five Year Plan (Volume 6). 2018
- [8] Luo Hongna. Research on the Informatization Teaching Model of Universities in the Big Data Environment [J]. Science and Education Wenhui, 2018 (34): 2. DOI: CNKI: SUN: KJWH.0.2018-12-016
- [9] Zhu Meixuan. Investigation and Research on the Construction of High School Smart Schools in Wuhu City under the Background of the New College Entrance Examination [J]. Anhui Normal University, 2019
- [10] Lian Meng. Practice and Exploration of Information Technology Teaching in the Context of Big Data [J]. Journal of Yellow River Water Conservancy Vocational and Technical College, 2017, 29 (4): 4. DOI: CNKI: SUN: HHSZ. 0.2017-04-020
- [11] Xu Jinghua. Research on the Informationization Management Path of Urban Construction Archives in the Era of Big Data [J]. Information Industry Report, 2023
- [12] Mao Zhenhua, Mao Zhenhua. Development Report on Internet Healthcare and Healthcare Big Data Industry in 2022 [J] [2023-12-05]
- [13] Feng Chuanjun. Research on the Innovation Path of Informatization in Higher Education Management in the Era of Big Data [J]. Vanguard, 2022 (24): 0037-0039
- [14] Xu Bing. Research on the Path of Informationization Construction in Higher Education Management under the Background of Big Data in the New Era [J]. Rural Staff, 2019 (20): 1. DOI: CNKI: SUN: NJCM.0.2019-20-275