

Research on the Working mode of Education Management in Colleges and Universities enabled by digitalization

Gang Chen

China University of Geosciences (Beijing), Beijing 100083, China

Abstract: With the continuous breakthrough of information technology, the digital era is coming. In recent years, the country actively promotes the strategy of digital power, and the deep integration of digital technology and college education and teaching management has become an inevitable trend of college management system reform. Based on this, on the basis of analyzing the specific requirements of college education management informatization, this paper actively explores the innovation path of college education management in the digital era, aiming at constantly improving the management structure of college education and teaching and improving the management level of college education and teaching.

Key words: Digitization; University education management; Information platform

Introduction: On March 15, 2021, the Ministry of Education issued the Notice on Strengthening the Informatization of Education Management in the New Era, which clearly pointed out that it is necessary to “give full play to the role of data to promote scientific decision-making, precise management and personalized services in education”. In recent years, with the strong advocacy and support of the state, colleges and universities all over the country are working hard to promote the construction of education management information, through accelerating the construction of hardware facilities, improving software systems, sports big data technology and other measures, to explore a new path for the development of education management information, and have made breakthrough progress. However, on the whole, some colleges and universities still have a series of problems in the process of education management information construction, such as repeated construction of facilities, poor data sharing and poor service experience. In addition, some colleges and universities are affected by traditional education management concepts, and there is always the problem of “emphasizing teaching and neglecting management”, which also hinders the construction of education and teaching information system to a certain extent. In this regard, based on the application of digital technology, based on the actual requirements of the construction of college education and teaching information in the digital era, this paper puts forward some innovative concrete measures to promote the development of college education and teaching management information.

I. The actual requirements of the information construction of college education and teaching management in the digital age

The informatization construction of college education and teaching management in the digital age is to make full use of big data technology, Internet technology and network platform to build a systematic management platform integrating multiple functions of school educational administration management, scientific research management, teacher and student management, teaching implementation, etc., so as to realize the intelligent and high-quality management of campus people, things and things. In March 2021, the Ministry of Education issued the Notice on Strengthening the Informatization of Education Management in the New Era, which mainly put forward the following four requirements for the informatization construction of education management in colleges and universities: First, integrate the school management system, that is, integrate educational administration and teaching management information, personal information of teachers and students and other kinds of information, collect scattered educational administration resources and data, build a one-stop management platform, maximize the saving of human, material and financial resources in all aspects of education and teaching management, and improve the efficiency and quality of education and teaching management on the whole. Second, intelligent service for teachers and students. Fundamentally speaking, college education management is the management of people, things and things involved in all aspects of education and teaching. Among them, faculty management and student management are the top priorities of college education management. It is necessary to use big data technology to realize intelligent management and intelligent management. Thirdly, adhere to the principle of sharing, realize the open sharing of educational data, and promote the data sharing among colleges and departments and different colleges and universities. Fourth, improve the hardware and software systems of education and teaching based on big data. Based on the constructivism theory, the three technologies of “cloud, network and terminal” are integrated to build a system-based and servicable education and teaching management system.

II. Explore the working mode and path of university education management enabled by digitalization

1. Shaping “Big Data View”

With the deep application of Internet technology, big data technology came into being and has played an important role in all walks of life. Specifically to the education management of colleges and universities, in order to ensure the systematic and procedural development of education management, leaders at all levels of colleges and universities should actively lead the vast number of staff to enhance the awareness of big data, establish a scientific “big data view”, arm their minds with advanced ideas, and promote the continuous improvement

of the quality of education management with advanced technology. First of all, when carrying out education and teaching management, the university should start from the perspective of big data, take “data” as the core basis, establish the management concept of “data management, data speaking”, and promote the in-depth implementation of education and teaching information construction; Give full play to the role of campus media, publicize the latest requirements issued by the Ministry of Education such as the Notice on Strengthening the Informatization of Education Management in the New Era, collect and integrate the existing educational resources, educational management basis, faculty and staff groups, the number and scale of students and other relevant data, strengthen the management of campus data resources, so that it can better serve the education and teaching management of colleges and universities. So as to promote the continuous improvement of the efficiency and quality of education and teaching management. Secondly, when setting up big data education and teaching management platform, universities should pay more attention to the confidentiality of data resources, emphasize the necessity of data resource security protection, and ensure the orderly and safe operation of data platform; Thirdly, strengthen the publicity and training of big data technology, guide school leaders at all levels, all teachers and students to enhance the awareness of big data, sort out the concept of big data, learn the latest teaching concepts, master the most advanced management means, explore the effective path of applying big data technology to education and teaching management practice, and empower the education and teaching management of colleges and universities. To ensure that the education and teaching management concept and management mode based on big data can better meet the reform and development needs of colleges and universities, so as to promote the conformal development of colleges and universities.

2. Build an information platform

As the core of multi-directional application of data resources, the university information management platform is of great importance to build its system and improve its functions. At present, in the process of building information platforms and improving platform functions, some colleges and universities are restricted and hindered by various factors such as capital and manpower, which leads to a series of problems such as relatively single platform function, insufficient personalized service and poor use experience. In order to fundamentally solve the above problems, optimize the platform functions, and bring better use experience to the majority of teachers and students, colleges and universities can start from the following points: First, integrate data. Centralized summary, analysis of the school’s detailed information data, and focus on the analysis of some of the distinctive characteristics of the data information, understand its causes, and then classify it, and finally unified input information management platform; Second, pay attention to the financial capital management data. According to the financial management data, the current financial situation of colleges and universities should be analyzed scientifically and rigorously, and the specific budget needed to build the information platform should be listed in detail. If there is still money left after the platform is built, it can be used for the subsequent development of the platform to constantly improve the platform functions; If the platform construction funds are insufficient, colleges and universities can obtain platform investment by applying for financial support, seeking investment help from enterprises, etc., to ensure the orderly progress of information platform construction.

3. Strengthen the construction of data management team

In-service teachers are an important group of college education and teaching management. In order to continuously improve the comprehensive ability and quality of teachers and make them better meet the needs of college education and teaching management in the era of big data, colleges and universities should constantly strengthen the construction of teachers and promote the professional development of in-service teachers. According to the different job functions of teachers, colleges and universities can divide in-service teachers into two categories: lecturers who participate in teaching and scientific research activities and administrative teachers who are responsible for educational management. In order to improve the in-service teachers’ ability to use big data technology and information platform, and effectively improve the quality of education and teaching management, colleges and universities can start from the following points in the construction of teacher team: First, strengthen the cultivation of big data concepts. Colleges and universities can regularly invite experts, authorities and front-line backbone teachers in the field of big data technology to campus to carry out special training lectures on the operation and use of information platform and the cultivation of big data awareness, so as to lead the majority of faculty and staff to establish big data concepts, improve the ability to use big data technology and improve the quality of education and teaching management. Second, encourage and support faculty and staff to use their spare time to learn and understand various advanced education and teaching concepts and methods based on big data through the Internet, books, newspapers, radio and television, etc., so as to equip their minds and improve the effectiveness of education and teaching management. Third, the implementation of collaborative innovation. Entering the era of big data, colleges and universities should further strengthen the training of big data talents and continuously improve the information application ability of all teachers and students. Further promote exchanges and cooperation with relevant enterprises and research institutes, broaden the training and development paths of big data professionals, and invigorate the collaborative innovation model in the field of big data.

4. Integrate “cloud, network, end” three technologies

Based on the above analysis of the requirements for the informatization construction of college education and teaching management in the digital era, colleges and universities should integrate the three technical elements of “cloud, network and terminal” when building the informatization education and teaching management platform, design the service plate of “big data + intelligent push”, accurately locate the service direction for teachers and students, and do a good job in the service work for teachers and students. For example, on the premise of having sufficient technical capabilities and financial support, colleges and universities can organize professional and technical personnel to build a systematic and intelligent education management information platform according to their actual conditions, and develop multiple functional plates such as big data service, resource integration, information provision, educational administration management, and teaching implementation, so as to improve the underlying functional structure and realize the all-round opening of API. On this basis, colleges and

universities should further optimize the campus regional network, and then with the help of the campus regional network and the data connection function on the platform, connect the service ports of each college and department, develop a subsystem in each department, realize the hierarchical design of the college education and teaching management system, and then build a systematic intelligent cloud. In the process of using the system, teachers can use the cloud platform to download and use various educational resources, curriculum resources, scientific research resources and teaching auxiliary resources. For example, with the help of cloud classroom platform, teachers can share education and teaching resources, promote professional teachers' communication and cooperation, and improve the quality of education and teaching management; Relying on the cloud classroom platform, various new teaching modes such as blended teaching, online teaching and flipped classroom are carried out to promote the in-depth implementation of college education and teaching reform. In addition, colleges and universities can also introduce national and global high-quality education resources into the system platform and develop a student system section. By logging in the student number, students can make use of the system platform for independent learning and enjoy a variety of high-quality learning resources.

5. Improve the management mechanism

The continuous improvement and innovation of college education and teaching management mechanism is an important way to comprehensively improve the level of internal control management. The construction of college education and teaching management mechanism under the background of big data needs colleges and universities to start from the following points: First, the establishment of data collection system. Every link of daily management of colleges and universities will produce a large amount of data, which will form a huge scale of data storage over time. If we do not pay attention to the fine management of data resources, it will not only cause problems such as chaos, leakage and loss of data, but also cause waste of data resources and make them not properly utilized. Therefore, it is necessary for universities to establish a set of data acquisition system. With the help of this system, colleges and universities can timely collect the data generated in the process of online and offline education and teaching on campus, and enter it uniformly, so as to effectively avoid the inefficiency of data. In this way, the school can not only timely understand the teaching, learning and scientific research of the whole school teachers and students, but also timely find the problems existing in the process of education and teaching, and timely targeted improvement and optimization, in order to further improve the effectiveness of education and teaching management. Second, the application system. To build a big data platform as the focus, develop teaching management, resource allocation, interaction between teachers and students, major events, campus security, major decisions, capital and finance and other core sections, so as to avoid problems such as platform function simplification. At the same time, colleges and universities should pay attention to the cooperation, compatibility and linkage of each plate and function of the big data platform, and promote the in-depth application of big data technology in college education and teaching.

In short, to further promote the informatization construction of college education and teaching management in the digital era and explore a new path of information-based education and teaching management is not only a fundamental requirement for the reform of college education management mode in China, but also an inevitable demand for colleges and universities to achieve self-upgrading, self-development and self-service. In the construction of higher education management informatization, it is necessary to clarify the work objectives, firmly implement China's requirements for the construction of college education management informatization, focus on the contents of teacher-student management, educational administration management, data collection and sharing, adhere to the optimization and innovative design of the education management system platform, and promote the innovation of the education management data system. In order to promote the high quality implementation of school education management information construction and highlight the characteristics of school education management.

References:

- [1] Chunli Wang. Reform and Innovation of University Education Management Mode in the era of "Internet +" [J]. Journal of Qiqihar University (Philosophy and Social Sciences Edition), 2023, (09): 156-159.
- [2] Dongxia Duan. Optimization Path of University Education Management in the era of Big Data [J]. Shanxi Youth, 2023, (14): 160-162.
- [3] Tiantian Zhang. Analysis on Improving the Effectiveness of College Education Management Based on New media Technology [J]. Journal of Changchun University of Technology (Social Science Edition), 2023, 24 (01): 40-43.
- [4] Xiaohu Luo, Lingjing Chen, Yuqing Zhu. Research on Reform and Innovation Path of University Education Management Mode under the background of Digital Reform [J]. Educational Observation, 2022, 11 (04): 17-19+30.