

Analysis of Innovation Path of Higher Education Management Informatization in the Context of Big Data

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Abstract: As early as the 1990s,the rapid development of technology led the education community to explore how to better apply computer technology to educational activities,which also gave rise to a new educational concept:digital education.In this context,building a new education management information platform and improving digital management systems have become the fundamental direction of education and teaching reform in the new era.As the cradle of comprehensive and practical technical talent output,higher education institutions can only cultivate more high-quality talents that meet the requirements of the times by focusing on"digital education"to seek ways to achieve educational management informatization.This paper discusses the informatization innovation of education management in colleges and universities in the Big data era for reference.

Keywords: Big data era;Higher education institutions;Informationization of educational management;Innovate

Introduction:

In 2021,in order to highlight the change of social development orientation and reflect the trend of education and teaching reform under the new curriculum standards,the Ministry of Education launched the Notice on Strengthening the Informatization of Education Management in the New Era,which clearly pointed out that education and teaching at all stages should use Big data technology and actively consider how to upgrade the education and teaching management model,Build an information-based education management platform that highlights the characteristics of university teaching,utilize information technology to ensure the effectiveness of school academic management,teaching implementation,and other work,and cultivate more high-quality industrial and technical talents.As soon as this notice was issued,it quickly sparked a new wave of reform,and various universities began to build information technology education management platforms that can reflect their characteristics.They used the Internet to provide logistical support for academic management and practical teaching management,in order to improve the quality of education and cultivate more high-quality talents that meet the needs of the times.

1. The Requirements for Informationization of Higher Education Management in the New Situation

The so-called informatization of higher education management,in essence,is the reform of education management based on network technology.It uses the Internet,Big data technology,network platform,etc.to build an integrated education management platform that can be used to carry out educational administration management,teaching implementation,teacher and student management,etc.,to improve education quality and ensure the comprehensiveness of education and education by promoting the intelligence of education management.However,in terms of talent evaluation standards in the new era,the informationization of higher education management is mainly reflected in the following four aspects:

Firstly,it is the integration of the education management system.Education management work includes but is not limited to academic management,practical teaching management,and basic information management for teachers and students.It unifies educational resources that are not clearly related,analyzes them after integration,and creates a one-stop education management system.This can better avoid the waste of manpower,material resources,and time caused by decentralized education management.

Secondly,it is the intelligence of teacher and student service work.The definition of educational management is relatively

abstract. Essentially, educational management is the management of people, things, and things on campus. As the two main bodies in the education industry, teachers and students, improving various management work related to the learning and life of teachers and students is the focus of educational management work. Therefore, education management informatization in the new situation should build a more intelligent teacher and student management platform through the realization of "Big data+intelligent push".

Once again, it is the open sharing of various educational data. Major universities should improve their information sharing channels and use the internet to achieve real-time data sharing.

Finally, it is necessary to improve the software and hardware infrastructure construction of the information platform, and provide strong technical support for educational management informatization through the comprehensive application of the three internet technologies of "cloud, network, and end".

2. Analysis of innovation path of higher education management informatization in the Big data era

2.1 Integrate the three technologies of "cloud, network and end" to improve the service sector of "Big data+intelligent push"

Based on the analysis of the requirements of higher education management informatization in the new situation, the three technologies mentioned in the "cloud, network and terminal" point out a clear line of defense for the construction of higher education management informatization: colleges and universities should focus on providing better services for teachers and students, and provide better logistics services for teachers' "teaching" and students' "learning" by building a service platform of "Big data+intelligent push".

For example, if it has sufficient funds and technology R&D capabilities, the school should, in combination with the actual situation of the school, set up a full-time R&D team to build an information platform for education management, and build a one-stop information education management platform, which should not only have multiple functions such as information query, Transaction processing, data sorting, resource invocation, Big data services, but also have a sound underlying functional architecture, Implement comprehensive API openness. Next is to improve the construction of campus local area networks, open service access ports for various departments on campus, and based on the layered design concept, establish department subsystems with the overall management system of the university as the core, in order to build a top-down intelligent cloud for information education management. Teachers from various departments can use such an integrated education management system to improve teaching plans through communication and cooperation, and improve teaching quality through online teaching, blended learning, and other educational models. Students can also use the student system section within the cloud to learn and enjoy various high-quality learning resources intelligently pushed after logging in, helping to improve their overall quality.

2.2 Ensure "one number, one source" and "cooperation and sharing", and create a standard system for campus data collection and application

To build a one-stop information education management platform, it is necessary to first collect sufficient and effective teaching data, and then comprehensively analyze it through the system. Based on the data analysis results, a comprehensive management work implementation plan should be developed. To ensure the scientific, reasonable, and feasible nature of the plan, data collection, analysis. When dealing with applications and other tasks, it is necessary to adhere to the principles of "one number, one source" and "one school, one standard" to ensure the completeness and effectiveness of data related work content. On this basis, data sharing can be better achieved, and major universities can mobilize resources related to other universities when constructing education management information platforms. Through comprehensive comparison, effective analysis can be conducted, and a comprehensive communication, consultation, and Communication platform can ensure the progressiveness of teaching management in colleges and universities, provide students with a perfect learning resource sharing platform, effectively improve the quality of education and teaching in our school, and ensure the all-round development of students.

2.3 Improve the coverage of educational management platforms in universities and create a comprehensive intelligent hierarchical management system

As mentioned earlier, on the basis of building the overall education management information system of universities, it is necessary to follow the idea of layered design and design different access ports for different departments within the school. In order to meet this requirement, universities should focus on one-stop educational administration and teaching, teacher and student management systems, and consider intelligent layered work in the process of promoting education management informatization. By effectively

designing and ensuring the security and stability of the system, the integration of subsystems with the main system is ensured to ensure better implementation of various practical functions in the information platform. In this process, in order to ensure the stable operation of the docking system and data security, the school should focus on professional teachers to establish a professional platform operation and supervision team, which is mainly responsible for the maintenance of the platform or software, the detection of various data in the firewall, password protection program design, etc., to improve the Factor of safety of the system.

2.4 Improve the various functions of the education management information platform and enhance its practical value

Based on the various requirements for innovation in educational management informatization under the new situation mentioned earlier, universities should pay attention to the implementation of various functions within the platform when building educational management informatization systems, and consider whether this function can create greater convenience for academic management, practical teaching management, teacher and student management, etc. Only in this way can we promote the improvement of the quality of education and teaching in universities and cultivate more practical technical talents that meet social requirements.

For example, based on the particularity of higher education, a dedicated service section for school enterprise cooperation management can be designed in the education management information system through school enterprise collaboration. Teachers design learning tasks related to students' majors according to industry development orientation. When students complete homework, they upload the completed homework to the service section. Teachers and professionals in the enterprise assess the professionalism of the homework content Evaluate practicality to help students solidify their theoretical foundation and cultivate their practical abilities. In addition, schools and enterprises can also cooperate based on the production experience of the enterprise

3. Conclusion

In summary, for universities that take the output of high-quality and comprehensive industry technical talents as their own responsibility, seeking innovation in education management informatization and creating a comprehensive information based education management system can lay a solid foundation for their teaching management, academic affairs management, teacher and student management, and effectively improve the level of university education and cultivate more outstanding talents.

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