Analysis of Educational Management and Innovation Strategy in Digital Age

Xudong Liu, PATNAO James Jr

University of the Cordilleras, Baguio City, Philippines
edsrjdqelpls@163.com

Abstract: *In recent years, with the rapid development of modern information technology such as the Internet and artificial intelligence, we have quickly entered the digital era, and big data has penetrated into various industries in the society and gradually become an important production factor. In this context, China also proposed the integration of educational management and digital, and carried out the digital transformation of educational management. Centering on the general environment of digital change, based on the current situation of educational management in our country, this paper summarizes the development process of educational management informatization in our country in recent years, and tries to put forward innovative strategies for educational management in the digital era, including building a high-quality team, deepening data integration, and strengthening top-level design, hoping to help promote the sustainable development of educational management in our country in the digital era.*

Keywords: *Digitization, Educational management, Innovation*

1. Introduction

With the wide application of emerging technologies such as artificial intelligence, big data and fifth-generation mobile communication in the field of education, the digitalization of educational management has become a hot topic in the field of education. The wide application and continuous innovation of digital technology bring new opportunities and challenges to the development of educational management in the new era. The digital transformation of educational management is not only a new trend of information development of educational management in China, but also a powerful measure to support the high-quality development of education and realize the leapfrog development of educational management. It shoulders the important mission of supporting and leading the modernization of education and building an education power, and is also the main direction of the reform practice of educational management in the future.

2. The Development Process Of The Digitization Of Educational management In Our Country

With the wide application of emerging technologies such as artificial intelligence and big data in the field of education, the digitalization of education has become a new hot spot in the field of education, and it is also the main direction of education reform practice in the future (Zhu Zhiting, et al., 2022). At present, China's education digital transformation work has made stage progress in the construction and application of infrastructure, digital resources, information platforms, etc., China's educational management information from the 1.0 era to the 2.0 era, is gradually from "simple application" to "deep integration", education digital transformation to start a new journey.

At the beginning of the "12th Five-Year Plan", China issued the "Ten-year Development Plan for Education Informatization (2011-2020)", which clearly put forward the core concept of the deep integration of information technology and education, and determined the development ideas with application driven and mechanism innovation as the basic policy. The outline of the 13th Five-Year Plan officially elevated "Digital China" as a national strategy, and digital technology was gradually applied to the construction of various fields in China. The report of the 19th National Congress of the Communist Party of China proposed to "do a good job of network education", which marked that China's education informatization officially entered the 2.0 stage.

During the "14th Five-Year Plan" period, the national "14th Five-Year Plan" Digital Economy

Development Plan "proposed to further promote smart education and promote the sustainable and healthy development of" Internet + education ", the national "14th Five-Year Plan" National Information Technology Plan proposed to implement the national digital literacy and skills improvement action, and the "Action Plan to improve the National Digital literacy and skills" released in 2021. It is clearly proposed to accelerate the construction and improvement of digital infrastructure, comprehensively promote the construction of digital campuses, build a number of smart classrooms, smart teaching platforms, virtual laboratories, virtual teaching and research rooms, and comprehensively improve the level of digitalization, and improve the digital literacy and skills of the whole people as a basic, strategic and guiding work in building a cyber power and a digital China. The "Key Points of the Ministry of Education in 2022" clearly states that it is necessary to implement the national digital education strategic actions and promote the realization of digital transformation and upgrading of education [1-5].

From a series of policies in recent years, it can be seen that the digital transformation of education has gradually become the focus of the reform and development of education in China.

3. The Value Of Digitization Of Educational management

Accelerating the implementation of national education digitization strategic actions and actively promoting the digital transformation of education is the inevitable choice for China's education to achieve from basic equilibrium to high equilibrium and from a major education country to a powerful education country (Yang Zongkai, 2022). Digital technology does not only change the decision-making of educational management and the treatment of education problems, but also enriches the technical means and management methods of educational management, changes the traditional ideas and working ideas of educational management, speeds up the construction process of educational management information system, optimizes the resource reserves of educational management, and enables educational management to develop towards information and network. Through the deep combination of big data and educational management, the efficiency and fairness of educational management can be greatly improved, and educational management can be developed with The Times [6-9].

3.1 Improve The Effectiveness And Scientific Nature Of Educational Decision-making

The deep mining and scientific analysis of big data by digital technology is not only cost-effective and fast, but also can effectively improve the purity of information extraction in educational management, change the situation of lack of data information or incomplete analysis in the past, optimize the educational management system, provide strong technical support for educational management decision-making, and help education administrators fully grasp potential problems and threats. To make effective guidance to the possible problems, solve the problems from the root, make the educational management decision more scientific, more in line with the reality, can effectively promote the progress of educational management decision [10-12].

3.2 Help Reform The Personnel Training Model

Driven by digital technology, education administrators can use emerging information technologies such as big data, cloud computing and artificial intelligence to provide personalized, precise and scientific education models, and combine technology to create creative, immersive and appropriate teaching models to provide higher quality education services. Students can better access their own learning resources on the digital educational management information platform, achieve both large-scale and personalized education and teaching process, help teachers' professional development and students' digital literacy ability, and cultivate comprehensive, liberalized and personalized development of new people in the digital era.

3.3 Effective Means To Promote Educational Equity

Educational equity is an important basis for social equity. Due to the restriction of economic development level, the restriction of educational management system and the influence of location factors, the problem of limited educational development opportunities and development space in the central and western regions of China has not been effectively solved compared with the developed regions in the east. The 2022 government work report repeatedly emphasized the need to promote

education equity and achieve a balanced education resource. In order to bridge the "education gap" and promote education equity, education digitization is an important driving force. The use of digital means can expand the coverage of high-quality education resources, break the limitation of time and space, make teachers and learners in different time and space share the same resources, and significantly increase the efficiency and effect of digital resource sharing.

4. Current Situation And Problems Of Educational Management Development In The Digital Era

Driven by the national education informatization policy and the joint efforts of the education system and all sectors of society, China's education digital reform has achieved remarkable results in infrastructure, digital resources, information platforms, application exploration and other aspects, such as the national primary and secondary school Internet access rate has reached 100%, and the national smart education public service platform has been launched. The supply quality of digital education resources has been significantly improved, and digital transformation is gradually becoming the focus of digital education reform. Although China's educational informatization has made progress, there are still many challenges in the integration of digital technology and educational management.

4.1 Insufficient understanding of the digital development of educational management

Current educational management workers have insufficient understanding of educational management informatization, lack the appropriate knowledge and skills to implement digital management and teaching, and have a weak awareness of using big data. The application of big data is too simple, one-sided and superficial. Under the background of the digital era, talent training has become the key thrust of digital transformation in all walks of life, and educational management also needs to cultivate talents who can actively adapt to the development of the future digital society.

4.2 Incomplete Of The Digital Development System Of Educational Management

China's educational management system has basically formed a relatively fixed model in the long-term development and improvement process, at present, many educational management models are still relatively traditional, there are many problems such as system confusion, cross-functional, lack of posts, etc., digital educational management system reform is not easy to promote. At present, the digital construction of educational management entities in many places is still in the actual process of spontaneous construction of functional departments, independent operation of various departments, low degree of resource integration, low degree of hardware equipment sharing, lack of unified standards of educational management data, no sound educational management information system has been formed, information independence, and data integration is relatively difficult. The digital work of educational management still has a single way, a lack of comprehensive development planning and a unified promotion mechanism.

4.3 Insufficient Resources Of Digital Reform Of Educational Management

The innovation of educational management system in the digital age is a complex systematic project, which requires the input of various resources such as hardware, software, human and material resources in the construction and improvement of the entire management system, which not only requires the overall coordination of government departments, but also requires the active cooperation of various educational entities. However, at present, many educational entities in China still have insufficient resources, lack of sufficient digital talents and financial support, digital infrastructure is insufficient, and data mining ability and innovation need to be improved.

5. Educational Management Innovation Strategies In The Digital Age

Driven by the change of digital technology, the social development has entered the intelligent society from the information society, and the information of educational management in China has also stepped into the digital stage. Promoting the digitalization of educational management is a systematic project, involving the overall promotion of multiple levels of work, and must be promoted from the three sides of "people", "things" and "system", and follow the principle of sharing, openness and consistency, in order to achieve the overall goal of comprehensive digital transformation of education

with high quality.

5.1 Build High-quality Digital Educational management Talent Team

With the integration of digital technology and educational management, the quality of staff engaged in educational management becomes more important. In order to implement the future-oriented new ability training and technology-enhanced teaching mode, in the educational management innovation reform in the digital era, it is necessary to increase the investment in human resources, cultivate professional digital educational management talents, enhance digital awareness, enhance digital leadership and governance capabilities of educational management, and consolidate teachers' digital literacy and skills. The evaluation standards and evaluation system of teachers' digital literacy should be established to improve teachers' teaching ability and digital literacy.

5.2 Improve the Construction of Digital Educational management Information Platform

Under the background of the digital era, China has new technical support in the field of educational management. On the one hand, relevant departments should guide education administrators to learn and apply information technology; on the other hand, relevant departments should actively build a more complete digital platform for smart education management, help participants correctly understand the relationship between digital technology and education management, and coordinate big data, teaching and management in the learning process. Unified data standards and norms can coordinate and deepen data integration, break data barriers, promote education data sharing and office collaboration, and improve the level of education management services and security systems. Following the demand-driven and application-oriented principles, we will release the vitality of educational resources, integrate digital technology, integrate multiple forces, improve the efficiency of education management through intelligent education, and shape a new paradigm of digital management system and security mechanism. On the other hand, in the process of coordinating the construction of digital educational management information platform, attention should be paid to regional differences and urban-rural differences, and the problems of digital construction gap and digital use gap should be fully considered, so as to develop a more inclusive and equitable educational and cultural environment.

5.3 Strengthen the top-level Design, Establish and Improve the Educational Management Mechanism

At present, the digital economy is leading the development of the new economy, and data is regarded as the basic resource, strategic resource and important productivity in the era of digital economy. Therefore, it is crucial to establish an educational management concept suitable for the digital era, reshape the big data application values of educational management informatization, strengthen top-level design, and protect data security and privacy.

First of all, from the government level, the digital economy formulates industry standards and norms related to education digitization, continuously improves relevant network information security laws, clarifies the establishment of a data transparency system, accelerates the construction of an artificial intelligence education ethics legal system, constructs a suitable management system and security operation mechanism, completes the top-level design and strategic deployment of education digitization standards, and strengthens the construction of education digitization standards and technology product research and development. Only by guiding the healthy and orderly development of the application of education digital standards and the service industry chain can we provide direction and guarantee for the implementation of education digital.

Secondly, relevant departments should establish and improve the education data security mechanism. Regular security assessment of educational data should be carried out, information protection of teachers and students should be strengthened, identity information and privacy information should be regulated, corresponding educational organizations and local schools should do a good job in data collection, transmission and use, and strengthen the security supervision ability of collecting and using teacher and student information.

Third, the relevant departments should gradually strengthen the strategic coordination planning of educational management units at all levels. Strengthen multi-dimensional connectivity of digital education and promote multilateral participation and cooperation mechanisms. At the national level, we will make strategic plans to define measures for the development of high-quality and inclusive digital

education, formulate long-term strategic priorities and action paths, develop relevant digital governance standards, and provide financial and policy support. Local governments and branch departments shall implement the implementation, clarify the characteristics of local education development, refine the key elements of implementation as needed, and implement specific actions. Enterprises, institutions and universities form multi-level linkage, carry out research and development of digital education products and resources, and provide more accurate, personalized and intelligent digital education services.

6. Conclusion

With the advent of the rapid development of the digital era, the digitalization of educational management has become the focus of widespread attention. To comprehensively promote the transformation of educational management mode in the digital era is an important theme of today's education reform and development, and it is also the only way to solve the problems of education equity and improve the quality of education. Continuous promotion of the integrated development of digital technology and traditional education, innovation in educational concepts, methods and forms, enabling digital technology to empower education, is of great significance for supporting the high-quality development of education, and helps to promote the realization of the digital transformation and development of the whole society, enhance the country's competitive advantage, and accelerate the construction of "digital China", which deserves great attention and extensive attention.

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