

Exploratory Practices of Digitally Enabled University Governance--The Case of Educational Digitization in Wuhan University of Technology

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Abstract: The wave of digitization has swept across the world, and digital technology has deeply penetrated into various industries and fields. With the deepening of the national education digitalization strategy action, the combination of college governance and digital technology has become increasingly close. The synergistic development of the three dimensions of technology, organization and environment is the key to promoting the modernization of university governance. Wuhan University of Technology keeps pace with the times, constantly innovates digital technology, optimizes its organizational structure, adjusts and tests to meet the needs of digitization, and improves the policy guarantee mechanism to ensure the smooth progress of digital transformation. It has achieved remarkable results in digital governance, becoming a model of digitally empowered university governance and demonstrating the great potential and value of digital technology in higher education.

Keywords: Digital construction; University governance; Governance modernization

1. Introduction

In recent years, based on the continuous development of Internet information technology and the continuous progress of society, digitalization has become an important trend in the field of higher education. Digital technology and higher education intertwine and integrate the development trend, at present, many colleges and universities opened the practice of digital construction, and strive to empower the in-depth development of institutional governance through digital technology. In the many exploratory practices, individual distinctive and replicable “samples” have emerged, which have become valuable experience in comprehensively promoting the modernization of the governance system of colleges and universities.

2. The Current Reality of Digital Governance Dilemmas in Universities

2.1 Low level of technical embeddedness in data governance

The embedding and application of digital technologies must have a high degree of adaptability. If the application of digital technologies lacks such adaptability, problems such as data redundancy, information inconsistency, and resource wastage may arise when processing and analyzing large amounts of data, seriously affecting the quality and effectiveness of education digitization.

In the current construction of education digitization, many colleges and universities are facing the problem of “data silos”. Due to the lack of effective integration and management of a large amount of teaching management information generated by business departments, they are scattered in different business systems, forming an information island, which seriously limits the maximization of the use of information resources.

2.2 Weaknesses in the concept of organization-building

In practice, some managers in the face of new technologies there is some kind of resistance psychology, fear of innovation, fear of change. This mentality can easily lead to the emergence of “technology over application” and “hardware over software” in the process of digital construction.

In addition, as a modern organization, higher education institutions are a comprehensive system with clear goal orientation, well-designed structure, conscious coordination of activities and close contact with the external environment^[1]. At present, many col-

leges and universities in the process of digitalization due to the existence of cognitive imbalance of digital technology and governance system, resulting in the failure to establish a governance system adapted to the process of digitalization, the digital governance process is hindered.

2.3 Lack of institutional safeguards

At present, many colleges and universities have not yet formed a perfect technical support and protection system for educational data security. There is a lack of necessary security norms and safeguards in key aspects such as data collection, use and transmission, which undoubtedly increases the risk of data leakage and abuse. Therefore, digitally-enabled university governance should not just be a simple application of technology; it should be a comprehensive and in-depth governance practice that needs to be supported by a strict and detailed governance guarantee system.

This governance guarantee system should cover all levels of governance, including but not limited to technical standards, operating procedures, regulatory mechanisms, emergency response and other aspects. When colleges and universities promote digital construction, they must use this as the basis to build a set of governance guarantee system that meets their own characteristics and development needs. This is not only a need to enhance the effectiveness of governance, but also an inevitable choice to safeguard the long-term and stable development of schools.

3. Wuhan University of Technology's Exploration and Practice of Digitally Enabling University Governance

Wuhan University of Technology vigorously promotes the construction of new infrastructure for education, promotes the deep integration of information technology with education teaching and scientific research, builds a high-quality education support system, and serves the modernization of the school's governance system and governance capacity^[2].

3.1 Practices and innovations in the technological dimension

In 2022, the university will focus on the fundamental task of establishing moral education, take the initiative to adapt to the requirements of the digital era, deploy the "5-30" action plan with informatization as the strategic engine, promote the "five new" plan with the connotations of "reconfiguring the new standard, injecting new kinetic energy, creating a new model, building a new system, and fostering a new culture. The "five new" plan with the connotation of "reconstructing new standards, injecting new kinetic energy, creating new models, building new systems and cultivating new cultures", and the implementation of the "30" specific actions with the core of "digital empowerment actions, measures to guide the action, management guarantee actions". Specific actions, accelerating the promotion of the digital construction of the school^[3].

In the integration of physical space, digital space and social space, the school has adopted a comprehensive promotion strategy, integrating the four core elements of cloud computing, network, data and terminals to achieve the comprehensive development of campus informatization.

In order to promote the integration and governance of data, the Digital Resource Integration Center has been built, focusing on data-driven "one main line", focusing on the "two architectures" of application and data, and sorting out the "three catalogs" of services, systems and data. ", form the business informationization list, service matters list, business data list, electronic resources list "4 lists", establish "1234" data governance system, accelerate the promotion of The "hot data" supply, continue to improve the data exchange capacity.

3.2 Organizational dimensions of change and management

The intertwined integration of digitalization and university governance is that the embedding of emerging digital technologies breaks the traditional internal sectional structure, and university governance gradually transforms to the direction of open, decentralized, and pluralistic governance, realizing the synergistic effect of the university's internal cross-institutional, cross-domain, and cross-level effects, and completing the process of empowering the university's external stakeholders^[4].

The university has also innovatively launched the AI assistant to the principal, with the university's network security and informatization leading group being responsible for overall guidance, research and decision-making, and coordination and governance, consisting of the Party and Government Office, the Informatization Office, the Network Center, and the Quality Evaluation Division and other functional departments.

The school adopts a flat management model. This model shifts the center of gravity of management downward and accelerates the transformation of functions, which not only simplifies the management level, improves communication efficiency and decision-making speed, but also reduces management costs and improves operational efficiency due to the simplification of the approval process.

At the same time, the autonomy of departments and faculties has been enhanced due to the reduction of management levels, which helps to further stimulate the innovative potential of faculty and students.

3.3 Coordination and adaptation of environmental dimensions

In 2022, the university has formulated and released the “Wuhan University of Science and Technology Education Digitalization Strategy Action Implementation Outline (2022-2025)”, which clearly defines the overall framework of the university’s informatization construction during the “14th Five-Year Plan” period, i.e., the “13410” system architecture. The outline specifies the general framework of the school’s informatization construction during the “14th Five-Year Plan” period, i.e. “13410” system architecture, which aims to promote the school’s informatization construction to a new level through a series of innovative initiatives.

The university has also issued a series of policy documents, including Measures for the Operation and Management of AI Assistant Principal of Wuhan University of Technology, Measures for the Management of Platform Software Construction of Wuhan University of Technology, and Guidelines for the Digitization of Curriculum Resources of Wuhan University of Technology, etc.

At the same time, the university explores the construction of a quality assessment work system, establishes a quality assessment informatization system, forms a quality report through data analysis, and incorporates the quality report into the target responsibility system assessment index system.

4. Conclusions

Colleges and universities should have a keen insight into the trend of change in the field of education, unswervingly implement and accelerate the strategy of education digitization, promote the construction and management of university governance digitization, promote the deep integration of digital education and industry, improve the construction of the university governance organization system, achieve the sustainable development of the digitization of college and university governance, and face the challenges and opportunities of digitization of education with a positive mindset to help push forward the higher education business of High-quality development.

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