

Transforming the University Management Model in the Concept of Digital Transformation

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Abstract

The emergence of the industrial revolution 4.0 places higher and higher demands on universities. To create citizens who successfully operate digital technologies, it is necessary to change the model and way of university governance. The smart university development orientation is a development roadmap in line with the 4.0 higher education trend. This orientation is deployed and strongly applied information technology to the work of education - training, scientific research in line with the trend of higher education. The study uses the approach, research from a management perspective, and the method of analysis and synthesis to make judgments and assessments about the digital university governance model. The results of the article have provided the foundational theories of university governance in the context of digital transformation. Thereby, the article proposes and makes some recommendations on innovation in governance at universities in Vietnam.

Key-words: Smart University, University Administration, Digital University, Digital Transformation in Education, Digital University Administration.

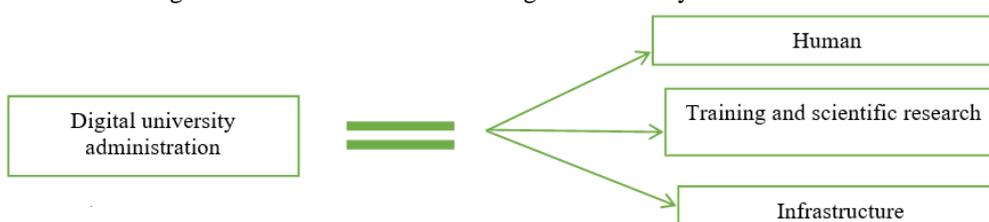
JEL Classification: M13, M14, M53.

1. Introduction

Renovating the university governance model needs to ensure the correct views of the Communist Party of Vietnam and the State on education and training. This is to ensure the implementation of the provisions of the Education Law. Resolution 14/2005 of the Government in

2005 on Fundamental and comprehensive renovation of higher education in Vietnam stated: "On the basis of innovation of thinking and higher education management mechanism, reasonable combination of and efficiency between clearly delineating functions and tasks of State management and ensuring the autonomy, enhancing social responsibility and transparency of higher education institutions. To promote the positivity and initiative of higher education institutions in the renovation process, with the core being the teaching staff, management staff and the active response and participation of the whole society. In order to successfully implement the university governance model in the context of digital transformation, it is necessary to develop 3 basic elements:

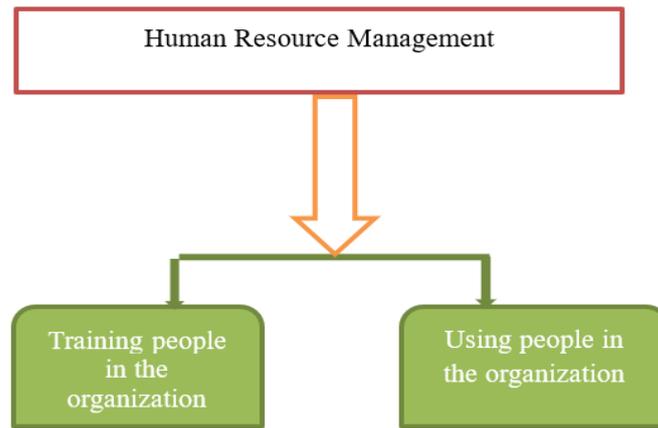
Figure 1 - Factors that make the Digital University Administration



In particular, the human factor requires universities to build a team of professional lecturers with international qualifications. The human factor also requires the university to have a good Rector with an international management mind. The second necessary element to create a successful university governance model is to ensure training and scientific research activities. Universities must develop training programs, teaching materials and teaching methods of international standards, and have many national, regional and international scientific publications. The training program is one of the prerequisites, contributing to the quality of training. If the training program is not good, it is difficult to have good training quality. Because of the importance of training activities, leading universities in the world regularly innovate training programs. Based on the new achievements of science and technology and the needs of society, geographical schools will determine the training content, form and method of training. The third essential element to create a successful university governance model is the guarantee of facilities. A university that wants to attract learners and create excitement for them must be beautiful and modern with international standards. Of the three factors above, the human factor is the most important.

It can be affirmed that university governance plays a particularly important role in social governance. In universities, the issue of human resource management, also known as human resource management, plays an important role. The university management of people is developed in two basic directions:

Figure 2 - Elements that make up the Digital University Administration



(Source: Authors)

In order to do well in the university management of people, the first thing is to train and implement the administrator's management capacity. In particular, the role of the Rector, the heads of faculties, departments, research centers and lecturers, scientific researchers play an extremely important role. In order to form an optimal university governance model, it is necessary to have a university Rector who is good at administration and professional.

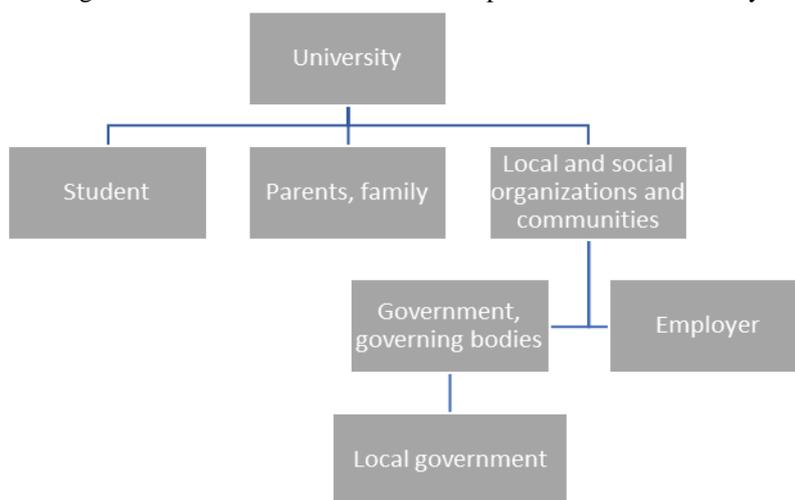
The second administrative activity in the organization is the university administration of training and scientific research. This activity will aim to develop and implement training programs, teaching materials and teaching methods of international standards, closely following the needs of businesses and employers. This will contribute to improving the quality of scientific research. In addition, university management of facilities will aim to form a beautiful and modern university worthy of international standards. Therefore, for successful university governance, managers need to refer to the model of university villages, schools - parks - cultural centers that famous universities in the world have built. These are the models of modern university governance that universities should aim for.

2. Literature Review

University governance is a topic that is not new, but always attracts the attention of many managers and researchers. Gallagher (2002) when studying university governance theory emphasized: "University governance is the structure of relationships to bring about cohesion, policy delegation, planning and decision-making, subject to responsible to the school, the social community and learners for the reliability, adaptability and cost-effectiveness of management". With the

continuous development of social forms, the university governance model also exhibits diversity and develops in different trends. John Fielden (2008), when researching on "Global Trends in University Governance", said that university governance includes many forms, showing diversity and developing according to the trends of society. Pavel Zgaga (2008) also stated that universities are now developing in the direction of autonomy, self-responsibility, improving the role and participation of stakeholders in education. According to the author Filip (2011), those who influence and influence the university to achieve its goals are called stakeholders. University stakeholders include:

Figure 3 - The Parties Involved in the Operation of the University



(Source: Authors)

Stakeholders in university operations include local authorities, current and potential employers (Aldridge and Rowley, 1998). The above studies have pointed out the parties involved in the university's activities, as well as the current trend and context of university governance model development. And Vu Quynh Nam, Duong Thi Tinh, Dinh Tran Ngoc Huy et al (2021) stated the important roles of IoTs and AI applications in various industries. Then, Trung Hieu Le, Nguyen Thuy Dung, Dinh Tran Ngoc Huy, Nguyen Thi Phuong Thanh, Dinh Tran Ngoc Hien, Nguyen Thi Hang (2021) also pointed IoTs has many uses in emerging markets including Vietnam.

3. Research Results on Digital University Governance Model

In order to improve autonomy, strengthen decentralization and autonomy, take advantage of opportunities to promote digital transformation, the University of Information and Communication Technology, Thai Nguyen University strives to be a among the first digital universities in Vietnam.

This first digital university model will provide learners with a modern and highly professional educational environment. That ensures learners have enough competitiveness and adaptability to the development trend of society in the context of the industrial revolution 4.0. With the support of information technology, the modern software that the school is equipped with will help create opportunities for learners to best support and share information. A lot of traditional educational activities will gradually be replaced by very fast and effective software, equipment and simulations that connect not only domestically but globally. The construction of digital resources and digital learning materials is done on a unified technology platform. This is an opportunity to study, research, teach and share knowledge, especially distance learning, lifelong learning. Digital universities bring great value to learners in particular and university stakeholders in general.

Table 1 - SWOT Analysis of Digital University Governance Model

<p>SWOT</p>	<p><i>OPPORTUNITY (O)</i> O1: The autonomy for universities is strongly promoted. O2: The National Digital Transformation Program to 2025, with a vision to 2030" identifies the education sector as one of the areas that need to be prioritized for digital transformation. O3: The field of information and communication technology is the foundation of the industrial revolution 4.0 and is widely applied in all socio-economic fields. O4: Digital transformation in higher education blurs the boundaries of distance.</p>	<p><i>CHALLENGE (T)</i> T1: Many public universities and private autonomy are constantly investing in infrastructure, and human, to attract highly qualified staff of the university led to the phenomenon of brain drain of ICTU.</p>
<p><i>STRONG (S)</i> S1: ICTU has built its vision and mission, quality objectives, and medium-term development plans. S2: ICTU has consolidated the School Council and implemented the School Council's activities in accordance with the provisions of the revised Education Law 2019. S3: The young, dynamic and enthusiastic ICTU faculty and staff have the ability to create and apply high technology due to the specificity of the industry, so it is easy to approach and adapt to change. S4: ICUT's training facilities are quite good compared to many other universities in Thai Nguyen University and the region. S5: Training programs are built following the application orientation of ICTU. ICTU has increased the participation of enterprises in the training process. S6: The School's Information and Communication Technology field is the foundation of the industrial revolution 4.0 which is being communicated and promoted naturally on many domestic and international information channels.</p>	<p><i>STRATEGIES S-O</i> S1,S2,S3,S4,S5,S6+O1,O2,O3, O4: Implement innovation model of university administration. => Strategies to change the governance model.</p>	<p><i>STRATEGIES S-T</i> S1,S2,S3,S4,S5,S6+T1: Take advantage to compete with other universities. => ICTU brand development strategy; Strengthen communication and promote the school's image in association with enrollment goals.</p>
<p><i>WEAKNESSES (W)</i> W1: The autonomy and self-responsibility of the member universities is still limited. W2: The work of training, fostering and self-training of highly qualified staff, especially managers, has many shortcomings and has not met the requirements of the University's development. The percentage of lecturers with doctorates, professors and associate professors is still very low compared to the national average, even compared to other member universities in Thai Nguyen University. W3: Demand-based training service activities are still spontaneous, without a general strategy and policy to encourage the exploitation of the University's specific strengths in the information and communication technology trend. foundation of the industrial revolution 4.0 and is widely applied in all socio-economic fields. W4: System of software for training management, student management, connecting schools and learners / learners' families, alumni / students, software to support teaching and learning without counting highly connected and interoperable data to be able to build a digital governance, teaching and learning ecosystem. W5: Experience in searching and implementing professional activities in international cooperation is very limited. The department in charge of international cooperation is very thin and unprofessional.</p>	<p><i>STRATEGIES W-O</i> W1+O1,O2: Strengthening the autonomy of ICTU. => Backward matching strategy.</p>	<p><i>STRATEGIES W-T</i> W1, W2, W3 + T1: Innovating training organization, quality assurance and student management => Backward matching strategy.</p>

(Source: Authors)

SWOT Analysis of Digital University Governance Model

Strategic Group 1: Renovation of University Governance: ICTU will implement partial autonomy in management and finance. Complete management software modules to ensure data connection and communication.

Strategy group 2: Developing a staff development strategy: Reviewing the teaching staff to rebuild the staff training strategy. Training professional working skills for staff in departments in accordance with the spirit of "service".

Strategic group 3: Innovating training organization, quality assurance and student management: Opening new training codes of interdisciplinary nature under the National Digital Transformation Project. Comprehensive transformation of teaching methods in the digital environment. Building a digital learning system and a digital learning ecosystem that integrates systems of training management software, student management, connecting schools and learners.

Strategic group 4: Building a focused and spearhead scientific research and technology transfer direction: Building in-depth research groups focusing on research direction from specialized faculties, with the participation of experts industry leader domestically and internationally. Linking scientific research with postgraduate training and fostering doctoral staff of the University.

Strategic Group 5: Branding, communication, promoting the school's image in association with enrollment goals: Establishing a unit specialized in internal communication, enrollment consulting with brand building strategies branding and marketing in a professional, synchronous manner, sticking to the main goal of attracting learners to the University.

4. Conclusion

The innovation of university governance model is an objective requirement for universities. In the context of digital transformation, ICTU is aiming to build into a smart university that is also a comprehensive university connected from many component systems with an artificial intelligence system. From there, it is possible to act intelligently like a human to teach, learn and research university-level science. With the orientation of building ICTU to become a smart university following the model of e-Government; strengthen the application of information technology in educational management, teaching and learning. Currently, ICTU has deployed LAN and software modules for management and training in different fields. Some Faculties and Centers have applied many scientific and technological advances such as: Digital, simulation techniques, electronic

engineering, electronics and telecommunications engineering for scientific research and training. ICTU in particular and universities in Vietnam in general develop according to a modern and professional model. In the new development context, to be more successful with the university governance model, ICTU needs to mobilize the participation of lecturers, scientists, learners, employees and other stakeholders. They will contribute to improving the quality and expansion of higher education opportunities, meeting the requirements of the country's sustainable development in the context of world integration. Therefore, in order for ICTU to achieve a sustainable governance model, develop towards autonomy and self-responsibility, it is necessary to establish and give full power to the school council. It is necessary to exercise comprehensive financial autonomy for the constituent parts of the University from the stage of revenue to the stage of expenditure, from the management of financial resources according to the enterprise model to the trading of financial resources. main. Thereby, helping the university effectively mobilize and develop revenue sources and assets for teaching and research activities towards innovation and international integration. ICTU needs to comprehensively promote innovation to realize its mission and vision to build ICTU into a prestigious university in the fields of information technology, communication and related fields. Thereby contributing to the economic, cultural and social development of the Northern midland and mountainous region and the whole country.

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