Digital Transformation in Education and Training Management at Some Educational Institutions, Regional University of the North Middle and Mountain Middle-Vietnam

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ABSTRACT:
In Viet Nam, Digital transformation is not a theoretical concept; is not a strategic direction of development in the future plan of society since the global outbreak of Covid 19. Digital transformation is trending, It is an action that needs to be implemented in all areas of the general development of society. With the breakthrough development of technology and science, the application of those achievements in education plays a huge role, creating many turning points in development, opening up many smart, flexible, effective new educational methods and at the same time saving costs and time for learners. Digital transformation has had a strong impact on management levels, training institutions, and learners.
Keywords: Digital transformation, educational management, educational institutions, regional university.

I. SOME METHODS TO PROMOTE DIGITAL TRANSFORMATION IN EDUCATION IN VIET NAM

Vietnam has been implementing digital transformation in education with many policies that have been issued with the aim of promoting digital transformation in the administration and management of education and training, contributing to the development of a digital government, digital economy, and digital society. Besides, Some other policies have also been implemented, such as Informatics will officially become a compulsory subject for primary school; Teaching using Steam technology; helping pupils solve difficult problems as well as explore many phenomena in the most intuitive life; For digital transformation applied in higher education, universities/research institutes have increased opportunities to cooperate with businesses and teaching activities with the need to use human resources from businesses. From there, schools/institutes will promptly update the information, update knowledge, adjust content develop training program output standards to meet the requirements of employers according to the trend of economic restructuring production structure suitable with the development of social life. With guidelines and policies that have been issued, up to this point according to statistics of the Ministry of Education and Training of Vietnam has 63 educational and training institutions, 710 Department of Education, and Training has done the construction of a common database for education, 90% of high schools have used software to manage schools, about 6000 electronic lectures more 7.000 theses, approximately 32.000 multiple-choice questions including the fields of natural and social sciences…from a qualified teacher.

Roles and tasks of digital transformation in regional universities

Have a lot of experience in digital transformation from universities around the world. However, applying it in practice, universities in Vietnam also face many difficulties, especially with universities belonging to regional universities with specific hierarchical models.

Roles

Need to develop a common plan for digital transformation for the whole University. To do that, it is necessary to have a high consensus on the policy of the regional university administrators. Although the overall implementation plan for digital transformation needs to be agreed upon throughout the University, the implementation plan needs to clearly define the contents common/private between the University and its member universities, which takes into account the peculiarities of each member university.

Do it, strategy, university digital transformation plan needs consensus and strong support of member universities. Regional universities promote their constructive role, member universities promote freedom.

The main task

Digital transformation in university administration: building a database between the regional university and its member universities infrastructure development and information technology application for operating, and training employees to improve the effectiveness and efficiency of the university administration.

Digital transformation in training: focus on developing new training programs, that fit with the trend of digital transformation, especially interdisciplinary training programs that link the strengths of member universities, building a system of shared digital learning, deployment of new training models, sharing common resources throughout the University, especially human resources facilities of member universities.

Digital transformation in research and creativity: transfer from traditional research to modern cross-disciplinary research, special interest in integrating Internet of Things (IoT) digital technologies, Big data, AI, and Cloud Computing… to solve applied problems in the socio-economic development of the region and the country.

II.   RESULT OF IMPLEMENTING DIGITAL TRANSFORMATION IN EDUCATION AND TRAINING AT EDUCATIONAL INSTITUTIONS OF UNIVERSITIES IN THE NORTHERN MIDLANDS AND MOUNTAINS REGION OF VIETNAM.

Thai Nguyen University is one of the three regional universities in Vietnam and is the largest university in the Northern Midlands and Mountains region of Vietnam with a total of 19 member units. With the policy of promoting digital transformation, there is a requirement to change the training of high-quality human resources, can compete in the new economy, this is a challenge but also an opportunity to make new changes in the operation system of the university in Thai Nguyen.

Perform a step-by-step digital transformation plan, the member universities of Thai Nguyen University have taken the first steps in digital transformation and have initial positive results. With the point of view of putting learners at the center, member universities determine training activities, teaching, and learning are the first content that needs digital transformation. With the active construction of digital learning materials with a system of lectures, exercises, and documents highly interactive. First of all, complete digital learning materials for core subjects in all training programs building a learning management system LMS applicable to all types of training. Currently, the results have digitized about 90% of teaching materials, 100% of theses, and 40% of references, the whole university has also built more than 200 electronic lectures. With the digitization of documents for teaching and learning, member universities also regularly foster technology skills and pedagogical methods for teaching including how to operate the tools/ digital environment, how to build digital learning materials, and teaching methods according to Blended learning. Along with the active implementation of digital transformation of member units, the Thai Nguyen University Digital Center job was well done, with more than 120.000 documents, 60% have been digitized, have been nearly 15 million hits, use remote documents. Center for Learning Materials and Information Technology - Thai Nguyen University has become the leading unit in the university library system in Vietnam in digitization and digital transformation with a quality management system according to ISO 9001:2015 and an Information security management system according to ISO/IEC 27001:2013 standard.

As the largest regional university in the Northern Midlands and Mountains region of Vietnam, Thai Nguyen University has determined to become a digital university and is in the top 500 universities in Asia.

III.   DIFFICULTIES AND SOME SOLUTIONS TO PROMOTE DIGITAL TRANSFORMATION IN REGIONAL UNIVERSITIES

Digital transformation in education in Vietnam has many advantages, especially from the policy of the Communist Party of Vietnam, the Government, Ministry of Education and Training.

With positives transformation results, Digital transformation in education still has many difficulties:

-Updating online knowledge in mountainous provinces with many difficulties, network infrastructure, and information technology equipment is not guaranteed great influence on the work of educational management in teaching and learning. This is the first problem that must be solved to help successful implementation.

-There is no control and comprehensive digital learning materials: to meet the learning and research needs of learners need digital archives exactly. However, human and financial resources are still unable to meet this job. Currently, there are many situations in digital learning suffuse, lack of authenticity, did not checked for quality and content. From there, causing the situation of knowledge disagreement and have many consequences. as a waste of money and time.

-Legal provisions on education are still incomplete, This is a big problem affecting intellectual property rights as well as information security, At the same time, this is also an opportunity to complete the time regulations and how to check and recognize online learning results, these problems now has not been uniformly implemented yet, unclear, not tight causing many inadequacies in the digital transformation process.

Some solutions promote digital transformation in education

With difficulties in the digital transformation of education, Vietnam needs solutions, and strategies long-term, step by step.

-Raise awareness about the importance of digital transformation in education for each teacher, lecturer, and administrator to together build a digital culture in education.

-Fostering improved skills and professionalism in the application of technology for all teachers, lecturers, and school administrators to perform digital transformation goals in education.

- Completing the database in education: need attention on implementing a system for synchronous data sharing in education, step by step converting paper documents into electronic documents to make it easier to manage. Completing synchronous network infrastructure.

- Information technology equipment for teaching and learning, create a chance for equal learning among regions with different socio-economic conditions, service rental priority, and mobilize resources for socialization participation in implementation.

- Develop digital learning materials (for teaching - learning, testing, evaluation, reference, scientific research, and building a digital data warehouse. Open learning materials for all general training, link with the world, meet self-study needs, the narrow distance between regions, and change the way of teaching and learning based on the application of digital technology.

- Deploying a controlled educational social network and unified orientation, creating a connected digital environment, shared between educational authorities with schools, families, teachers, and students, developing open online courses, deploying a shared online learning system across the industry to help teachers, support teaching for disadvantaged areas.

- Building network infrastructure, and technology equipment: Network infrastructure and technological equipment must be renewed, especially in areas with poor connectivity help narrow the regional gap. With this solution, it is possible to prioritize using the form of service leasing or mobilizing social resources.

- Enhance technology combinations such as Big data, AI, and Blockchain with specialized digital databases to build information collection systems make forecasts, and predictions and create applications and services suitable for learner objects.

- Perfecting the legal system and application of management software: perfecting the policy and legal system that plays an important role in educational management as well as ensuring the interests of learners. Accordingly, it is necessary to agree on regulations on data exploitation and sharing; form in teaching; effective management of the online course; school opening conditions.

- Digital transformation in education implemented by the application of management software is the solution applied by many institutions today. The software integrated with outstanding features will bring an effective school management solution, helping schools to enhance their professional skills and manage student records and teaching records quickly with only a simple mouse click. At the same time, develop online courses that contribute to the training of teachers to support teaching in economically underdeveloped areas.

IV. CONCLUSION

A digital transformation is a tool, a driving force for development, and creates new directions to better promote the role of regional universities associated with the regional development mission defined in the Education Law 2018 of Viet Nam

[7]. The digital transformation of regional universities is a process of movement and development. Digital transformation needs change synchronized. combination of three factors: people, institutions, and technology. In there, people have the most important role, the role of the leader is the most important. Therefore need a leadership team with strategic thinking about digital transformation, and deployment experience to build appropriate regimes, and connect and resonate the strength of member universities.

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