

Promoting Digital Transformation in Universities In Vietnam

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Summary: *Digital transformation in education in general and higher education in particular is an important task to implement the Government's National Digital Transformation Program to 2025, with a vision to 2030. National digital transformation is a process that needs to be implemented synchronously at all levels, sectors, and fields. In each agency and unit, digital transformation needs to be implemented synchronously in all areas of operation. The article addresses the issue of digital transformation in training activities - one of the extremely important activities of each university.*

Keywords: *Digital transformation, university, student, Vietnam.*

Concept

Digital transformation in education is the application of digital technology and internet information systems to the field of education to improve the quality of teaching, learning, and educational management. Including improving teaching methods, improving learning support devices and tools, enhancing the experience of students, students and training participants.

Digital transformation helps create a learning environment where everything is connected. The new combination of technology and security aims to narrow geographical distances to create learning experiences, while enhancing people's interactions. However, digital transformation in education also poses a number of challenges, including ensuring equitable access to technology, training and support for teachers and students, and ensuring information safety and security in the digital environment.

The goal of digital transformation in education is to improve the quality of education, create a modern, flexible and fair learning environment, to comprehensively develop the capacity and qualities of learners, meeting the requirements of the digital age and international integration.

Some examples of digital transformation in education:

- Online learning (E-learning): Schools and educational institutions provide online courses through digital platforms and tools, allowing students to study anytime, anywhere.
- Electronic textbooks: The initiative to replace traditional textbooks with electronic textbooks, helping to save paper and easily update content. Applications such as Kindle, iBooks, Google Play Books support reading e-books on mobile devices.
- Learning management software (LMS - Learning Management System): Learning management systems such as Moodle, Blackboard, Canvas, ... support teachers to manage courses, evaluate and monitor students' progress easily and effectively.
- Online collaboration tools: Use applications such as Google Classroom, Microsoft Teams, Zoom, ... for teachers and students to interact and study together flexibly and effectively.
- Learning support applications: Learning support applications such as Quizlet, Duolingo, etc. help students practice skills and knowledge through interesting online exercises and activities.

- Artificial intelligence and machine learning in education: Using artificial intelligence and machine learning to analyze learning data, provide personalized suggestions, improve teaching quality and support students' learning process.

- Virtual reality and augmented reality: Applying virtual reality (VR) and augmented reality (AR) technology to education, helping students experience a more vivid, interactive and realistic learning environment.

The above examples demonstrate that digital transformation has created many opportunities and potentials for education, helping to improve the quality of learning and meet the diverse needs of students in the digital age.

The Importance of Digital Transformation in Education

The importance and benefits of digital transformation in education are to help provide quality education and equal opportunities for everyone around the world. Especially the impact of the Covid-19 pandemic has caused most schools to close, which has demonstrated the importance and urgency of digital transformation in education.

Diversified information

Nowadays, all information can be found on the Internet, with a variety of topics and high reliability. Students need to select and search for information intelligently to access the most useful and accurate information.

Flexible in learning

Online classes on Zoom, Teams, Google Meets, ... help students to participate in learning anytime, anywhere, exchange knowledge, discuss or interact with each other easily.

Open thinking

Through applications such as Skype or other popular social networking sites, students can easily communicate in real time globally. This helps them broaden their horizons and quickly update useful information and knowledge.

Popularizing digital knowledge for students

Today's students graduate and will become the country's main workforce. Therefore, technology and digital are at the core of their working activities. It can be seen that digital transformation in education contributes greatly to cultivating digital knowledge for students.

Personalized learning

Modern online learning technologies and software allow students to easily customize lectures at the right pace, according to their interests and cognitive ability levels. In addition, customized learning platforms also allow students to combine learning materials from many different sources, thereby having more suitable experiences.

More Interaction

Teachers can provide students with more interesting ways to learn, and easily absorb new information using modern tools such as tablets, projectors, chatbots, AR/VR, AI-powered software, etc.

THE CURRENT STATE OF DIGITAL TRANSFORMATION IN UNIVERSITIES IN VIETNAM

The explosion of technology has helped the digital transformation process in Vietnamese education to receive many new teaching methods, bringing positive signals. Smart devices such as projectors, electronic boards, etc. to support learning are installed in classrooms. Many schools are applying online teaching methods, creating conditions for students to study flexibly and safely, such as organizing E-learning courses, documents, online Ebooks, etc.

Vietnam is in the most comprehensive and profound stage of digital transformation in education, as evidenced by a series of policies and documents on digital transformation in education being issued. Some other policies that have also been implemented are to implement new general education programs:

- Informatics becomes a compulsory subject for students from grade 3 of primary school. This aims to help students quickly access new knowledge and skills at home and abroad.
- Teaching will be integrated with Steam technology, helping students solve difficult problems, and at the same time explore many scientific phenomena in life in the most intuitive way.
- Applying digital transformation in higher education, schools/research institutes increase opportunities for cooperation with businesses, and at the same time deploy teaching activities closely linked to the needs of human resources from businesses. Thereby, schools/institutes can grasp information, update curriculum, forecast new professions according to the trend of shifting digital economic structure, production structure to suit the development of the market and society.

Digital transformation in higher education is one of the key tasks that the Vietnamese education sector has been interested in in recent years, especially after the impact of the COVID-19 pandemic. Under the direction of the Government and the Ministry of Education and Training (MOET), many higher education institutions have proactively implemented digitalization activities and applied information technology in management, teaching and learning.

Achievements

Despite many difficulties, digital transformation activities in Vietnamese higher education have achieved many remarkable results:

- 100% of universities have implemented online training during the COVID-19 pandemic, opening up a trend of flexible and diverse learning.
- Many schools have digitized training management processes such as credit registration, graduation assessment, academic management, scores and electronic transcripts.
- Some typical universities such as Hanoi University of Science and Technology, FPT University, Vietnam National University, Hanoi... have developed a comprehensive digital ecosystem, connecting platforms from learning, research to management.
- Massive open online courses (MOOCs) are increasingly developed, providing flexible learning opportunities for learners inside and outside the school.
- International cooperation activities in digital training are increasing, contributing to improving the quality and diversifying training forms.

These results demonstrate the potential and important role of digital transformation in improving quality, efficiency and equity in higher education.

Some difficulties and limitations

Despite achieving many positive results, the digital transformation process in higher education in Vietnam still faces many barriers, which can be analyzed in the following aspects:

- Unsynchronized information technology infrastructure

Many higher education institutions, especially local or non-public schools, still lack technical infrastructure such as high-speed internet connections, servers, and specialized software. The system of digital platforms is often fragmented, not connected to each other, and does not meet the requirements of integrating and synchronizing data across the school. This greatly affects the effectiveness of online teaching and learning management and organization.

- Lack of human resources with digital transformation capacity

A significant number of lecturers and higher education managers have not been properly trained in digital technology skills, and are still confused when implementing online teaching activities, designing digital learning materials, and operating the LMS system. Meanwhile, the IT technical staff at schools is thin, not enough to fully support the digitalization process of school activities.

- Limited digital learning materials

The development, standardization and sharing of digital learning materials at universities have not received due attention. Most of the current digital learning materials are still personal, small-scale, unsystematic and of poor quality. Open learning materials shared between schools have not yet been formed, leading to a situation of "everyone doing their own thing", wasting resources and lacking inheritance.

- Lack of financial mechanisms and long-term support policies

Many higher education institutions have difficulty mobilizing financial resources to invest in digital transformation. In addition, the lack of specific mechanisms for finance, equipment bidding, technology service rental, etc. also reduces flexibility in implementing digital technology projects.

- Uneven awareness and thinking about digital transformation

Many leaders and officials at higher education institutions still consider digital transformation as a “temporary response” rather than a long-term development strategy. Digital thinking still lacks innovation and creativity, and is not closely linked to the requirements of restructuring the entire system of governance, training and human resource development of the school in the digital age.

PROPOSED SOLUTIONS

To effectively promote the digital transformation process in higher education, it is necessary to synchronously deploy the following groups of solutions:

- Perfecting policies and legal frameworks

Developing and promulgating a separate policy framework for digital transformation in higher education, especially on learning data standards, digital learning materials, electronic degrees, and information security.

Have a mechanism to encourage training institutions to invest in technology, innovate teaching models towards flexibility, personalization, and lifelong learning.

- Developing digital human resources

Training and fostering digital skills for lecturers and managers, especially the capacity to design online courses, exploit open learning materials, and manage classrooms on digital platforms.

Enhancing the role of students in building, reviewing, and exploiting digital learning materials, thereby enhancing interaction and initiative in learning.

- Investing in technology infrastructure

Upgrading network systems, servers, learning management and teaching software to meet the needs of large-scale online training.

Applying artificial intelligence (AI), big data analysis (Big Data), virtual reality technology (VR/AR) in teaching and assessment.

- Building a digital learning materials ecosystem

Developing a national open digital learning materials repository, with connections to universities, research institutes and technology enterprises.

Standardizing content, format, copyright and methods of updating learning materials to ensure quality and sharing capabilities.

- Promoting cooperation and sharing

Strengthening cooperation between higher education institutions to share infrastructure, learning resources and jointly develop digital training programs.

Connecting with businesses, especially technology enterprises, to update new trends and deploy advanced digital transformation solutions.

REFERENCES

- [1]. Ministry of Education and Training (2022). Program for digital transformation in the education sector to 2025, with a vision to 2030. Issued under Decision No. 131/QĐ-TTg dated January 25, 2022 of the Prime Minister.
- [2]. Ministry of Education and Training (2022). Guidelines for implementing digital transformation in higher education
- [3]. Central Propaganda Department (2021). Training materials on the topic of National Digital Transformation
- [4]. Institute for Education Development Strategy (2023). Research report: Digital transformation in Vietnamese higher education - Opportunities and challenges
- [5]. Dr. Le Truong Tung (2022). Digital transformation in Vietnamese higher education: From trends to strategies. Journal of Education (ISSN 2354-0753).