

REALITY AND SOLUTIONS TO IMPROVE THE EFFICIENCY OF DIGITAL TRANSFORMATION AT SAO DO UNIVERSITY

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1. Introduction

The digital age is also known under other terms such as the computer age, the information age or the new media age. This is a period in human history with the transition from the traditional industry brought about by the industrial revolution through industrialization, to an economy based on computerization. The digital age was conceived by taking advantage of the advancement of computers. The advancement of technology in daily life and social organization has led to the modernization of information and communication processes, which has become the driving force of social evolution.

With the continuous development of technology, digital transformation is the trend of society and especially in education. The application of technology in education plays a huge role, creating a turning point in the development of education, creating many new, smarter, more effective and cost-saving educational methods. Up to now, the trend of digital transformation in education has had a profound impact on people.

The National Digital Transformation Program to 2025, with orientation to 2030” was approved in Decision No. 749/QĐ-TTg dated June 3, 2020 of the Prime Minister as follows:

“Developing a support platform for teaching and learning remotely, thoroughly applying digital technology in management, teaching and learning; digitizing documents and textbooks; build a platform to share teaching and learning resources in both face-to-face and online forms. Developing technology for education, towards personalized training. 100% of educational institutions implement distance learning and teaching, in which testing a training program that allows students to learn online at least 20% of the program content. Using digital technology to assign homework and check students' preparation before going to class” [1].

Simply put, digital transformation in education is the application of advanced technologies to enhance the learner's experience; improve teaching methods as well as create the most convenient learning environment.

Digital transformation applications will create a smart educational model, thereby making learning knowledge simpler and easier for learners. The explosion of technology platforms has created favorable conditions to impart knowledge and develop learners' self-learning ability without being limited in time and space.

Recognizing the importance of digital transformation in the context of the 4.0 technology revolution, in recent years, Red Star University has gradually invested in facilities as well as applied technology in management and training activities. However, digital transformation at the University still has some limitations as well as many challenges that need to be solved. This is the reason why I do research on *“Reality and solutions to improve the efficiency of digital transformation at Sao Do university”*

2. Reality of digital transformation in teaching and learning of lecturers and students of Sao Do University

Today, with the strong development of information technology, it has positively affected most socio-economic fields, changing the way of life, working style and thinking of people. With the goal of developing the school in the direction of an applied university, improving the quality of training, in addition to investing in equipment for training, in the past year, the school has strengthened information management. Through the operating camera system at lecture hall A in order to better manage teaching and learning, catching up with the 4.0th Industrial Revolution.

In order to contribute to improving the quality of comprehensive training and enhancing digital transformation, the University pays special attention to investing in building facilities for training in electrical and electronic engineering technology; Control engineering and automation; Automotive engineering technology; Mechanical engineering technology... such as: Invest in purchasing 150 high-profile specialized computers, 30 electronic sewing machines and 01 two-in-one diagram printer to equip the sewing automation practice room to help students access to modern technology and equipment to meet learning needs; Equipping the Mechanical Engineering faculty with the Siemens Digital Industrial Laboratory with 26 high-configuration computers installed with the copyright of Solid Edge 2019 software sponsored by Siemens Software Co., Ltd. with a total value of 324,000 USD, helping students continue approaching drawing techniques, modern design, digitization technology and modern technology applications in the mechanical industries, machine manufacturing industry, can process complex details, bring effective results high economy [3].

In order to improve the management and administration in teaching and learning, the school has installed an operating camera system in 100% of the theory classrooms. The camera system is connected to the school's home network via the school's home network. IP address range will then transmit information, images and sound to the B1 central operating room. At the central operating room, the Board of Directors and administrators can sit and observe the teaching and learning situation of lecturers and students through the server system with clear audio and images. The installation of the operating camera system helps to improve the responsibility of the lecturers and the learning spirit of the students, improve the quality of training, and contribute to the good

implementation of the educational philosophy of the University.

In addition, the University has repaired and upgraded the library center with an area of 600 m² with over 4,000 reference books in Vietnamese and foreign languages, connected to the ProQuest Central database of the Union of Libraries. Vietnam aims to improve the service quality for students and lecturers in looking up references and scientific research.



Operating camera system

In addition, the University has set up an e-learning website to serve training and provide reference materials for students, enhancing exchanges between students and lecturers without having to meet face-to-face. Many lectures, textbooks, learning materials of the modules are posted on the website by the lecturers to help students be active in learning and research. Especially during the recent COVID-19 pandemic, the application of information technology to online teaching activities has helped ensure the training progress of the University.

In the testing and evaluation work, the University has invested in building 10 multiple-choice exam rooms using the copyrighted PMT-EMS software to save time in grading, ensuring accuracy and fairness for learners.

3. Opportunities and challenges in digital transformation at Red Star University

3.1. The opportunities in digital transformation

Developing digital equity in learning

Digital equity in academic education is the fact that all students can access the same resources, data and information in an easier and less expensive way. Thanks to digital transformation, students can study, access different content at home, at school or anywhere, anytime, anywhere with just one device – mobile phone, tablet, laptop... connected to the internet.

Digital transformation in education helps students to expand their learning resources, not just stopping at the library to collect many books. The information contained in the digital library, on the website, on the internet will be less expensive or completely free and they can be shared between students and faculty in just one click.

In particular, digital equity in education allows a person to continue his education throughout, even his whole life, while still meeting his own work, taking care of his family...

Getting a chance to experience customized educational activities

To drive digital mobility in education, faculty and even students gain access to customized benefits, allowing them to build curricula that use big data to shape learning, teaching in the future.

To recommend appropriate courses and learn more courses by providing relevant information and data, this technology system used big data sources (Big Data). It is also an opportunity for students to customize the learning process faster, more accurately, and with more progress.

Having opportunity to study anywhere, anytime

It can be said that learning on digital platforms has broken the boundaries between geographical and cultural distances, the source of knowledge provided is unlimited. As long as you have an electronic device connected to the internet, you can study in groups, exchange knowledge with students across the country, further around the world, study together or build topics.

Besides, for university students, they can flexibly study, participate in seminars, and disseminate knowledge of the university while still being able to perform other tasks such as temporary study abroad, internship. ...

Building modules in learning

Digital mobility in education has the strongest and most positive impact on the ability to build modules for faster learning. Educators can prepare their programs and courses using the best content previously developed by other colleagues.

Thanks to these digital assets, educators can create a wealth of effective materials. In particular, digital also helps educators measure how students learn most effectively, tailoring learning modules according to aspects based on measurement statistics.

Training a generation of high-quality teachers

Digital transformation in education is the "land" to train a generation of quality teachers. Because, in order to adapt to the use of high technology in teaching, the teaching staff must constantly learn, cultivate knowledge and develop skills to develop and improve the quality of teaching.

3.2. Challenges in digital transformation in the field of education and training

Technology infrastructure

Along with the rapid development in digital movement, the same requirements are required for infrastructure, equipment for both learners and direct instructors, educational institutions and management agencies. In order for all educational and management activities to operate well, there must be hardware devices, educational applications, software, platforms...

Moreover, digital transformation in education requires connections such as: individual programs, software, etc. to be compatible with each other, integrated and 'accessible' on the same platform. From there, allowing activities of teaching, management, learning, assessment, testing, management, etc., to interact between learners and teachers and the school. The Internet is crucial for this process to work.

Skills in using technology

Digital transformation in education cannot be successful if the people directly managing it do not have enough skills to use technology. Teachers need to have new skills to organize teaching activities, "keep" students in "classes", maintain students' attention throughout the entire learning process. They are the key to success in online training and digital transformation.

Readiness of learners

Factors such as equipment, telecommunications infrastructure, etc., and technical factors of lecturers are still not convincing enough. Learners need to be fully equipped both in terms of mood and environment as well as online learning methods to be effective [2].

4. Solutions to promote digital transformation in education

In order to promote digital transformation in the University effectively, without missing the opportunity that the 4th Industrial Revolution brings, the University needs to implement the following solutions:

- Disseminate, propagate, raise awareness and responsibility, be transparent about ideology and determined to join forces to implement digital transformation for lecturers and managers; Build a digital culture in schools.

- Complete synchronous network infrastructure, practical information technology equipment for teaching - learning, scientific research, create learning and research opportunities for lecturers and students.

- Foster teaching staff with technology and pedagogical skills to implement digital transformation, including teaching methods by operating digital tools/environment, and document compilation digital, build interactive lectures, organize teaching training courses with technology, teach in the blended model (Blended), train on the use of digital tools and platforms...

- Add to the training program a number of compulsory basic subjects on technology to provide the minimum knowledge to help learners integrate into the digital education environment.

5. Conclusion

The article has analyzed some contents related to digital transformation in the field of education, including digital transformation content, assessment of digital transformation situation at Red Star University, opportunities and challenges in transformation. number. On that basis, the article has proposed some general solutions to promote digital transformation in the University in order to improve the quality of training and keep up with the development of science and technology. The implementation of solutions needs the efforts and determination of leaders and all lecturers and staff in the University, towards the goal of application-oriented development of the University.

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