Digital transformation in teaching and learning at university in Vietnam

Abstract: Digital transformation in education is a process of replacing traditional educational methods with modern educational methods, including facilities and educational methods, teaching methods, management methods, etc. It makes full use of technology to aim for high quality education. For education in general and higher education in particular, digital transformation offers the opportunity to apply technology to create rapid changes in models, organization and teaching and learning methods. Accurate understanding of digital transformation and proper assessment of the current situation to build a reasonable digital transformation roadmap to quickly improve the quality and effectiveness of training are critical to the University in the current period.

The article focuses on researching and analyzing higher education trends in the digital age, thereby confirming the function and significance of digital transformation in university teaching and learning in Vietnam.

Keywords: digital transformation in education, education 4.0, technology application, teaching and learning at university.

1. Introduction

In recent years, revolutionary term "Industry 4.0" constantly mentioned in most activities and events in Vietnam. To benefit from this revolution, the first thing that organizations and every country need to do is build a modern, smart and secure digital technology platform to connect all members of the organization with each other as well as with other systems. This process can be understood as digital transformation, therefore, this is considered the current inevitable trend in the activities of enterprises, organizations and the state. This trend forces organizations and governments to change their approach to operations, product and service delivery, marketing efforts, and every other aspect of their organization. Universities are institutions that research and provide educational services, spread and develop human knowledge, therefore, without digital transformation and successful digital transformation, universities cannot be a place to attract, train and lead in knowledge for scientists, students and businesses. Therefore, promoting digital transformation in university teaching and learning in Vietnam will create a driving force for innovation, creativity and improve training quality of universities in the context of the current industrial revolution 4.0.

2. Education trends in the digital age

2.1 What is digital transformation in education?

Digital transformation of education sectors, which means the application of technology, based on the purpose and structure of the educational enterprise. Currently, it is applied under 3 main forms:

- Apply technology in teaching methods: Smart classrooms, programming ... in teaching.

- ▪ Application of technology in management: Tools for operation and management
- ▪ Technology application in the classroom: Teaching tools, facilities.

2.2 Education trends in the digital age

Only in higher education is it becoming common for students to have a computer or smartphone with an internet connection in the digital age of the internet's explosion. This has a direct impact on teaching and learning strategies, fundamentally altered the conventional educational approach, and created an active and global educational environment. Most of the universities in the nation are using digital learning platforms more and more.

E-learning is a form of education and learning based on the internet connection. With an internet-connected tablet or smartphone, both lecturers and students can participate in the classes opened on the system through a tablet computer or smartphone with internet connection. When signed in, the area is set up as a classroom, where teachers can instruct pupils directly or delegate tasks. They can also store lectures and educational resources in a variety of forms, including Word, PDF, Video,... Students can access online lectures at any time and study, turn in homework, participate in forum discussions, take quizzes, write essays, determine right from wrong,... To enhance education, e-learning specifically provides resources like: Using electronic seminar tools, simulation tools, test development tools, multimedia presentation creation tools,...

In addition, there are other software programs like Camtasia Studio. With the help of these programs, we can quickly and easily construct online courses, video lessons, and explanations. Use screen recordings, audio, voice narration, PowerPoint, picture-in-picture, and webcam to interact with students.. The main tools are: Record everything; Set up customizations; Add some effects; Record in picture; Edit the recorded video again; Export movies to an on-demand format; Share and present electronic lesson plans. Many institutions use Microsoft Teams and Zoom because of their user-friendly interfaces, ease of use, and integration of numerous functions for related operations. as much as possible when instructing. The term "digital learners" refers to students who use technology integration in the classroom in the digital age, "digital instructors" refers to educators who use technology in the classroom.

- • **Digital learners**

With this strategy, the learner now occupies the middle. Modern education allows students to freely select pre-designed modules from the curriculum framework and is more pro-active in allowing students to determine the content of their learning program. This trend predicts that instruction will focus on students who need to adjust to the new curriculum, including in-person instruction and online learning through the system. Learners should think about deciding on individualized learning programs and styles that are based on each person's abilities, interests, learning preferences, and needs. Learners must actively train in and acquire learning abilities since they are a crucial part of any company, community, or network in the digital age. To ensure work efficiency, it is necessary to have both individual and teamwork abilities. Learning with whom, what, and when is something that must also be planned in a rational and logical manner.

- **Digital instructors**

Learners can connect with a variety of information sources in fields rich in formats and languages outside of the school's campus by using current innovative technologies in the field of education. As a result, in order to meet the needs of students, it is necessary for the teaching staff to continuously adapt, learn, and use new technology. Teachers perform the role of instructing, transmitting, and connecting students with data sources and learning materials based on technology; Teachers are digital teachers who must be proficient in technology to easily support students in approaching, accepting, and using it, as well as inspire students to be able to use it and make the most of this priceless resources. Today, the use of Apps that support learning as a "virtual teacher", using artificial intelligence technologies, big data, connecting to the Internet of Things, machine learning, deep learning, robot teaching is becoming more and more popular. It appears that learners are growing more and more engaged in learning and studying with the help of these "virtual experts", willing to experiment and join up to use these clever assistive Apps.

- **Digital learning**

Number learners and number teachers are working hard to advance digital learning, which is likewise growing rapidly. The sources of knowledge, information, and educational skills are being increasingly digitized from A to Z from the design, production, publishing, and archiving stages with exceptionally big capacity, resulting in extremely vast open sources of educational resources. Readers will be able to quickly access, look up information, exchange and contribute ideas thanks to stored, digital resources,… Digital data is progressively becoming an objective, efficient tool for the educational process.

- **Digital learning environment**

Learning will be more individualized as a result of learners' interactions with artificial intelligence products, robotics in the classroom, face recognition, biometrics, and emotion recognition, among other technologies, leading to new, varied, and more eficient access to information for individualized learing. Application of virtual reality, augmented reality, mixed reality, imaging reality,… will create interactive opportunities in physical/virtual, multi-dimensional space, increasing accessibility and processing information; expand the productive learning environment; develop the capacity of creative thinking and problem solving of both learners and teachers, resulting in continually improving teaching and learning quality.

3. The benefits of digital transformation in the education sector in Vietnam
- **Be proactive in learning, flexible educational environment**

Through the Internet, digital technology has created a convenient learning environment that allows for on-the-go learning. Learners can now acquire knowledge more quickly and simply. This has given Vietnam in particular access to an entirely new open education.

Having the appropriate learning environment available for all courses is an advantage. To learn the most, study wherever you feel most comfortable, whether it be at home, in a coffee shop, or some other location. The learning outcomes will undoubtedly be boosted and improved with a relaxed attitude. It gets rid of the restrictions of distance, optimizes study time, and improves learners' thinking.

Besides, learners can acquire knowledge conveniently and easily on any device (computer, laptop, smartphone,…). A completely new avenue for open education has now been created. Anyone, everywhere, at any time, has access to the widest variety of information and expertise. It entirely eliminates the restrictions of distance, maximizes study time, and develops students' awareness and critical thinking.

- **Increased interactivity and real-world experience.**

Many individuals believe that the ability of teachers and students to interact will be restricted by online learning. However, this new approach to learning actually fosters more two-way communication because students and teachers may speak face to face without being constrained by physical distance. Additionally, 4.0 technologies like virtual reality and augmented reality applications give students more "real" reality experiences. The new technology assists learners in having multi-sensory experiences, fostering a sense of wonder and excitement during learning, as opposed to the conventional theoretical learning method, which can only be envisioned through books.

- **Unlimited access to learning materials**

Thanks to the vast and limitless collection of documents, students may readily access them and save a lot of money. Additionally, the digital revolution in the education sector makes it easier to access and use resources swiftly with online tools, unrestricted by the users' financial means.

By lowering the cost of printing, technology makes it simpler and more cost-effective for teachers and students to share documents and textbooks.

- **The quality of education is improved**

Education has undergone a digital transition that has ushered in a new era when teachers and students are empowered to use technology. Achievements such as:

- Bigdata enables online knowledge storage.
- IoT aids in managing, supervising, and monitoring student activities.
- Blockchain facilitates the management of student data and academic records, allowing for the management and sharing of data from numerous institutions, the recording of academic history, and transcripts to assure accurate information.

- **Maximum savings in training and learning costs**

The cost of fixing issues with buildings, facilities, equipment, and other things will be lower for schools. More options are provided to learners via number conversion. They can take use of inexpensive online learning opportunities instead of attending public schools. Even better, students can select the courses that best suit their interests and needs. This results in higher-quality learning that is also more effective.

4. The reality of digital transformation in teaching and tertiary study in Vietnam
4.1. Background and realities of digital transformation

The fundamental and thorough reform of education and training in Vietnam is constantly a crucial task in the Party and Government's objectives and policies. Since the VIII Party Congress up to now, "Education and Training" has always been considered the "top national policy" and has always been integrated in the strategies and policies for development of economic and social fields. The Party and Government issued documents on proactively participating in the Industry 4.0, building e-Government, digital government, digital economy and digital society: Resolution No. 52-NQ/TW dated September 27, 2019 of the Politburo, Resolution No. 17/NQ-CP dated March 7, 2019 of the Government, Resolution No. 50/NQCP dated April 17, 2020 of the Government. Most recently, the Prime Minister issued Decision No. 131/QD-TTg on approving the Project to enhance the application of information technology and digital transformation in education and training in the period of 2022-2025 with a vision to the year 2030 on January 25, 2022. In which the broad objective is specified as: Utilizing technological advancement to promote innovation in teaching and learning, improving the quality and accessibility of education, effective education management; building a digital-based adaptive open education, aiding in the development of the digital economy, digital government, and digital society.

The Government and all professions, including teaching, are undergoing a massive digital shift. A number of policies have been released to support the digital transformation of education, gradually completing the legal framework. Examples include laws governing the use of IT in management, setting up online training, and regulating distant learning at the university level.

In reality, the prevalence of cellphones and the Internet gives Vietnam a significant advantage in the digital transformation of colleges. According to statistics, the number of Internet users in November 2021 reached 68.72 million people, accounting for 70.3% of the population, the high percentage of Internet users in the population was one of the initial conditions to help Vietnam continue to Access to education 4.0 is faster. Internet speed in Vietnam is considered to be good compared to the world, when the average download speed of fixed and mobile Internet in the world in November 2021 was 58 Mb/s and 29.06 Mb/s. In these two types of connection, Vietnam is ranked 42nd and 48th in the world, respectively, up from 50 and 53 in January 2021. In Southeast

Asia alone, Vietnam's Internet lags behind Singapore, Thailand, Malaysia and is higher than other countries[1].

Table 1. Proportion of population covered by 2G, 3G, 4G

Unit: %

No	Target	Unit	2017	2018	2019	2020
1	Percentage of population with 2G mobile coverage	%	99.5	99.7	99.8	99.8
2	Percentage of population with 3G mobile coverage	%	98	99.7	99.8	99.8
3	Percentage of population with 4G mobile coverage	%	95	95.3	97	99.5

Source: Ministry of Information and Communications

At a cost of millions of USD, many cities in Vietnam already have many hotspots and free wifi access for citizens with a minimum internet speed of 256Kbps.

Due to the State's excellent policies and action programs, there will be a substantial increase in the number of IT-related businesses between 2016 and 2020, adding excitement to the digital economy.
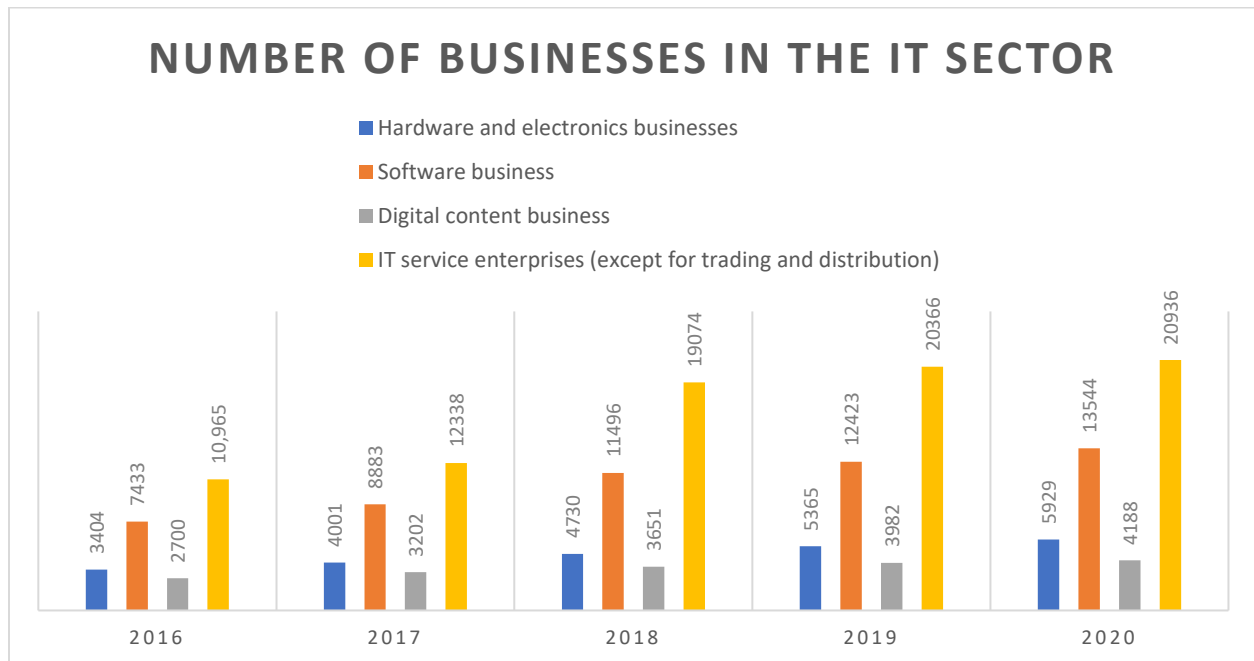
Source: Information and Communication Technology White Paper 2021

Chart 1. Number of businesses in the IT Sector from 2016 - 2020

Infrastructure, services, ecosystems and digital ecology are gradually being upgraded and improved, meeting the needs of the society.

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[1] https://vnexpress.net/internet-viet-nam-dang-o-dau-so-voi-the-gioi-4405005.html

With investments from the government and private businesses, ICT and telecoms infrastructure is advancing steadily. faster and more reliable internet speed. Science and technology, notably 5G technology, are gradually advancing and competing with the rest of the world. The digital environment is becoming more and more diverse as a result of the rising number of websites, electronic, and social networks.

Table 2: Number of websites and social networks

Target	Unit	2016	2017	2018	2019	2020
Number of general websites of press agencies	Website	172	166	189	175	184
Number of general websites licensed by agencies, enterprises or organizations that are not press agencies	Website	1,323	1,384	1,349	1,587	1,716
Number of licensed social networking sites	Social Network	240	401	493	614	755

Source: Ministry of Information and Communications

The index of human resources and information technology infrastructure of the provinces is quite high. Vietnam has improved the qualifications of the labor force in the ICT industry to develop the digital economy; the workforce is qualified and ready to meet domestic and foreign markets. Students' self-learning (neighboring workforce) has also increased as a result of the growth from an online learning services platform. By 2020, the number of employees in the IT industry in Vietnam is 1,081,268 people.

Table 3. Number of employees in the IT industry in Vietnam

Unit: per person

Target	2016	2017	2018	2019	2020
Number of employees in hardware and electronics industry	568,288	678,917	717,955	760,097	842,458
Number of employees in software industry	97,387	112,004	127,366	143,149	149,072

Number of employees in the digital content industry	46,647	55,908	51,952	42,479	34,377
Number of IT service employees (except for trading and distribution)	68,605	75,692	76,419	59,481	55,361
Total	780,926	922,521	973,692	1,005,206	1,081,268

Source: Vietnam Information and Communication Technology White Paper 2021

Vietnam currently has more than 250 university and college information and communication technology training institutions with 158 universities, 442 vocational colleges and vocational secondary schools. Some training institutions provide a large source of high-quality IT human resources such as Hanoi University of Technology, Ho Chi Minh City University of Technology, VNU University of Engineering and Technology, University of Science - VNUHCM, FPT University, Posts and Telecommunications Institute of Technology, etc. along with a series of academies and training centers in all provinces.

Table 4. ICT human resource training

Target	2018	2019	2020
Total number of universities offering IT, electronics, telecommunications, and cyber security training	149	158	158
Total number of vocational colleges and vocational secondary schools offering training in IT, electronics, telecommunications, and cyberinformation security	412	442	442
Total number of university enrollment targets for IT, electronics, telecommunications, and cyberinformation security	51,114	6,435	8,085
Actual rate of university enrollment in IT, electronics, telecommunications, and cyberinformation security	82%	82%	84%
Percentage of enrollment targets for vocational colleges and intermediate vocational schools in IT,	12.53%	9.54%	7.7%

electronics, telecommunications and network information security/Total enrollment targets			

Besides institutes such as CDiT Institute of Information and Communication Technology, Vietnam Institute of Software and Digital Content Industry (NISCI), Institute of Information Technology - Vietnam Academy of Science and Technology, there are many more. Other research institutes affiliated to universities and academies. In general, Vietnam has a full range of information technology education, training, and research institutes that cater to market demands as well as the growth of the digital economy.

4.2 Transition of reality in teaching and learning of higher education in Vietnam

- **Application of converting numbers in teaching and learning methods.**

It is necessary to mimic Digital Technology trends in learning and teaching environments. Smart technologies like video recorders, smart desks, smart electronic boards, meeting equipment, etc. have been implemented in classrooms.

Numerous educational businesses also offer opportunities for students to engage in activities, access cutting-edge technology, and even take part in virtual reality tours.

- E - learning online course
- Methods of learning through projects
- Learning method by using virtual reality
- Classes in Programming, STEM, STEAM, English for technology
- Integrate online learning video
- Learn from AR / VR (Augmented Reality / Virtual Reality): AR is an immersive setting in the real world where perceptual knowledge will be digitized to enhance real-world experiences through a phone's camera or video viewer. In contrast, VR simulates a 3D environment for the player using special equipment such as computers, sensors, headsets, and gloves. With the help of these technologies, subjects such as History, Geography, and Biology come to life. The Cleveland Clinic, for example, has trained AR-based 3D human modeling and surgery at Case Western Reserve University.
- Competency portal: Combines the use of a webcam to monitor suspicious actions while students are taking a test, such as opening tabs, sharing photos, etc.
- Learning Experience Platform (LXP): LXP enables autonomy in contrast to learning management systems (LMS), which only provide a one-way learning path. For instance, LXP offers the option of curricular streams in place of a predefined curriculum or presents content arranged according to the pace and preferences of the student.

Many higher education institutions have proactively embraced emerging trends in educational technology to implement training based on MOOCs (massive open online courses), integrate augmented reality (AR) and virtual reality (VR) into learning systems, or implement intelligent digital learning systems. The Polytechnic University, for instance, has updated its training model and program, enabling students to actively select, independently plan, and register for study

modules in integrated programs. The University of Medicine and Pharmacy of Ho Chi Minh City has implemented digitalization using the image management tools Centricity Universal Viewer and Advanced Visualization, which has improved workflow, assisted physicians in diagnosing patients, and produced more accurate reports. The University of Technical Education of Ho Chi Minh City in early 2019 established a Virtual Teaching Center (UTEx) to organize online courses. Accordingly, the courses are still ffered in their previous format but have been improved to include online access to readings, tasks, and scoring. In accordance with the quantitative requirements, the content will be quantified into three tiers. Nearly nine million interactions each year are the outcome of digital transformation; in the second semester of 2019-2020, nearly 24 000 students participated, especially the number of students interacting daily during the epidemic season is increasing significantly. Nowadays, University of Technology of Dong Nai also conducts testing, examining, and evaluating modules in the form of online tests that adhere to the output standards of each module and are fair, objective, and consistent with the module's needs and the actual scenario.

Many centers and schools have developed online courses. In order to build high school students' capacity, Apax Franklin Institute (Hanoi) has combined the teaching and learning model of industry 4.0 and applied the three-in-one approach (Facetime - Apptime - Teamtime) in the high school level. The University of Medicine and Pharmacy, Thai Nguyen University, developed the "Samsung Smart School" (Smart Classroom) model, which makes learning engaging and entertaining and promotes two-way contact between students and lecturers. This concept incorporates team-based learning, interactive teaching with smart devices, and class management. Digital conversion is becoming more and more important for government organizations and academic institutions in the context of a Covid-19 outbreak, when colleges in Vietnam must employ online and distant learning techniques to reduce social exposure. According to the Ministry of Education and Instruction's guidelines, around 110 out of 240 higher education institutions have implemented online training, with varying degrees of success. Universities have been promoting online training and academic staff restructuring, even though it is necessary given the disease condition. Universities must collaborate to develop together in order to turn into digital institutions given their limited resources and to increase both their own skills and those of the entire system. Enhancing international collaboration in the area of online training through the exchange of practical knowledge and electronic learning resources. On the information network, open resources will be dispersed, facilitating universal access to knowledge. Learning will not be disrupted by the global development trend if there is an accessible repository of learning resources, regardless of where, when, or whether there is a social divide. Although the digital transformation in university governance has been strengthened in the context of the unpredictable Covid-19 epidemic, Vietnamese universities still face numerous difficulties and restrictions in shifting the number of training activities due to weak technology infrastructure, the process and experience of training institutions, and the lack of teaching and learning abilities of teachers and students in the network environment. Additionally, instructors and students may be exposed to a variety of dangers related to information security and safety, as well as possible risks from the Internet and social media.

Some students still only occasionally use social networks to communicate documents, submit assignments, and check completed work, so the professionalism and security are not very good. One of the other limitations in the digital transformation in universities is that the collection, sharing, and exploitation of educational management data and digital learning data is still single, without coordination between schools. As a result, there is a need for a common legal framework in accordance with the regulations on copyright, intellectual property, information security, electronic transactions, and the law of information sharing, specifically: identifies the list of information subject to mandatory declaration and input - distinguishing from private personal information belonging to the individual rights; stipulating the copyrights of electronic lectures (what cases are used, what conditions, use in whole or in part); regulations on exploiting digital databases and databases (who is allowed to exploit, what to exploit, to what extent, what conditions, who to verify, who to permit); regulating the legality of electronic records in general, and in particular electronic transcripts and transcripts (especially in case of transferring or transferring schools nationwide). The development of the digital data system and sufficient size of the digital learning environment (including open data) are prerequisites for fulfilling the demands of the national digital transformation in general and of education and training in particular. In many communities and schools, the local phenomena of data is still present.

Furthermore, practical steps and strategies for the education technology process have been slow up to this point. Universities are just starting to undergo a digital transition. The connection between domestic and international higher education standards has not been established by universities.

Higher education institutions are not producing enough high-caliber, international scientific research to meet the expectations of socioeconomic development and global integration. Graduates cannot quickly satisfy work requirements because the connection between universities and businesses in university training is still not strong.

- **Attend attendance without contact**

Educational institutions can benefit from this technology in the following ways: Students can log their attendance by scanning their ID card or by employing facial recognition technology.

- **Applying technology in management**

Currently, school management software has been applied by many public institutions. Private educational institutions employ software to manage their operations; these operations have been steadily computerized with school management software.

Using this technology, librarians, teachers, or administrators can handle student transcripts, timetables, or other information, making it easier for students to look up information when visiting the library.

- **Use of enrollment technology**

The admissions or registration process is frequently quite time-consuming, for instance: the learner must wait in line to complete the admissions procedures and send the paperwork, and frequently, the learner must visit the school to check the status of the position. To submit their

own, the admissions team must also review their profile, verify their qualifications, make a list of students and update their profile status on the system.

Notably, the "new generation" registration method will allow parents, students, teachers, and school administrators to access it online, unlike when it was available before to the pandemic. Educational institutions can receive assistance in conducting this approach at the following points:

- Educational institutions might reduce the amount of papers needed during the application process.
- Technology will automatically assist in selecting the right candidate
- A computerized response system can delegate conventional queries.
- Schools get real-time access to updated information about classes, professors, students, etc.
- Students don't have to stand in line or waste time checking the status of their applications
- Without enrolling at various schools, students can submit applications simultaneously.

- **Operate and administer educational companies using technology.**

The education sector is actively encouraging technology development, online-oriented work procedures, the use of BigData, IoT, and improving departmental communication.

Every activity runs like a business, with supporting divisions like human resources and financial accounting…

Some sizable private schools even employ software, like accounting and salary-calculating HRM programs, in their daily operations. Although the database is streamlined, the tool system is extremely irregular.

5. Conclusion

Overall, it is clear that integrating technology into education is a necessary trend that will have a significant impact on society as a whole and benefit people, groups, and the entire community. When we are firmly and completely aware of this issue, we will be prepared to accept it, actively work to modify our ways of thinking, and work together to fully reinvent education in the direction of modernization.

For teachers: Develop your creativity and flexibility in the classroom. The knowledge that teachers already possess is limited, but they also continue to acquire and connect with the knowledge of other disciplines, such as informatics, and develop their abilities to use visuals and sounds in their work. Design of the lectures; fuller and more appealing lectures; easy sharing of lectures with peers; discussion of lectures; and improvement of lecture quality

For students: having access to a novel teaching strategy that is significantly more alluring than the conventional reading-copy strategy; Additionally, communication between professors and students has greatly improved, and pupils now have several opportunity to express their own thoughts; assist teachers in better understanding the personalities, levels of learning, and abilities of students so they may make appropriate, scientific adjustments to support the growth of each learner's competencies; Practice the required abilities while sitting in the school chair.

For the society: Teaching techniques have changed for the better and teacher quality has increased. We can only hope that Vietnam's education will soon keep pace with the advancement of nations with the best education systems in the world.

The use of new technology will undoubtedly benefit instructors and students, but it will also have a significant impact on how society and the nation as a whole grow.

REFERENCES:

1. Application of Science and Technology in Education (https://2075.com.vn/ung-dung-khoa-hoc-cong-nghe-trong-nganh-giao-duc/)
2. Hưng, M. V. (2020). Lecture on Improve Self-study Ability for Learners. Vietnam National University, Hanoi.
3. Long, L. K. (2020). Lecture on Theory and Methodical University Teaching. Vietnam National University, Hanoi.
4. OECD. (2021). *Digital Education Outlook 2021*. Pushing the Frontiers with Artificial Intelligence, Blockchain and Robots. Paris: OECD Publishing.
5. The Political. (2019). Resolution 52-NQ/TW on a number of Guidelines and Policies to actively participate in the 4th Industrial Revolution. September 27, 2019
6. The Prime Minister (2020). Decision No. 749/QD-TTg approving the "National Digital Transformation Program to 2025, with orientation to 2030. June 3, 2020Clark, E. (2018). Digital transformation: What is it. *EDUCAUSE Review https://er. educa use. edu/artic les/2018/5/digit al-trans forma tion-what-is-it*.
7. The Prime Minister. (2017). Decision No. 117/QD-TTg approving the Project "Strengthening IT Application in Management and Support for Teaching-learning activities, Scientific Research contributing to Improving the Quality of Education and Training in the period 2016-2020, with orientation to 2925". January 25, 2017.
8. The Prime Minister. (2022). Decision No. 131/QD-TTg on approving the Project to enhance the application of information technology and digital transformation in education and training in the period of 2022-2025 with a vision to the year 2030. January 25, 2022
9. Why is it necessary to use Information Technology in Teaching? (http://cte.vnu.edu.vn/vi-sao-can-ung-dung-cntt-trong-giang-day/)
10. World Bank. (2020). *Reimagining Human Connections: Technology and Innovation in Education at the World Bank*. World Bank: Washington, DC.