Application of digital transformation in higher education: Evidence from Vietnam Trade Union University

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Abstract:
Digital transformation in the training program is one of the focuses of the Trade Union University. In the period from 2017 to 2022, the school focuses on teaching activities associated with digital transformation. This is an opportunity for lecturers and students to access modern teaching methods, thereby improving their knowledge, skills and professional autonomy. The digital transformation process also faces a number of challenges due to the school's infrastructure in terms of digital platforms and other factors affecting the overall operation of this process. The article will analyze the favorable and difficult factors affecting digital transformation in entrepreneurship education for students at the trade union university in recent years.
Keywords: *Students, higher education, digital transformation, trade union universities*

I.   Introduction

Entrepreneurship is a training program in many universities around the world, helping young students understand and have the ability to create a new business after they leave school. So far, most countries have affirmed that entrepreneurship plays a huge role as a strong driving force of socio-economic development. With the term "start-up", it is thinking of setting up a new business with different large and small scales, but the problem has a broader meaning if we consider starting a business as a solution to create jobs, overcome unemployment, economic growth, social development, etc. In order to create the right direction and develop strongly, people pay special attention to Entrepreneurship Education to train people with qualities and abilities to create businesses such as the spirit of innovation, creative thinking, adventurous spirit, etc communication skills, knowledge of science and technology, business ethics, etc. People who want to have the ability to start a business must have extensive training in specialties, but they must have rich knowledge in economics, philosophy, psychology, sociology, ethics, science and technology... Along with this requirement, people who want to start a business must be dynamic and creative, dare to take risks, always learn to rise and surpass themselves.

In the world, the problem of starting a business has been raised for a long time. In 1947, Harvard University (USA) opened the "Entrepreneurship Education" Program, and in 1989, UNESCO officially introduced the concept of "Entrepreneurship Program". Following the US, there are a number of countries that have successively included the Startup Education Program in their university training plans. In Vietnam, guidelines and policies related to supporting innovative startups have been gradually formed, in which, prominently, the Project "Supporting the national innovation startup ecosystem to 2025" approved by the Prime Minister. The Government's project "Supporting students to start a business by 2025".These projects have helped start-up activities to innovate schools more vibrantly and achieve many achievements. In particular, the National Startup Festival of students has been held annually since 2018 and has really become an intellectual playground, a place to form valuable scientific ideas and research to promote the entrepreneurial aspirations of young people. This is also a favorable environment to support students to form and realize startup ideas and projects.

Proud to be a university with a tradition of nearly 80 years, the innovative training activities of the Trade Union University in recent years have helped improve the capacity to meet the requirements of scientific practical application in digital transformation. At the same time, the school also coordinates with employers to advise and support startups in training and teaching activities so that students have the spirit of entrepreneurship and innovation. The school's lecturers are always conscious of improving their capacity for training activities, while learners promote creativity, innovation and practical application right when they are in school, promoting the development of students' capacity and quality. The introduction of entrepreneurship education into teaching in schools has helped learners be equipped with knowledge about innovation, change learning methods, help think sharply to solve problems, as well as apply innovation skills in the learning process. exercise. In addition, it also promotes the spirit of innovation, aspiration and motivation for research and study, as well as building a patriotic spirit, consciously contributing efforts to the development of the country and serving society.

II.   Methodology

The Prime Minister has issued Decision No. 1665/QDTTg approving the Scheme "Supporting students to start a business by 2025". The general objectives of the Scheme are: Promoting the entrepreneurial spirit of students and equipping students with knowledge and skills about entrepreneurship during their time studying at schools. Create a favorable environment to support students to form and realize start-up ideas and projects, contributing to creating jobs for students after graduation. The specific goal of the Scheme is that by 2020, 100% of universities, academies, universities, colleges and intermediate schools plan to support students to start a business; At least 90% of pupils and students of universities, academies, universities, colleges, intermediate schools, high schools and vocational education and continuing education centers are regularly propagated, educated to raise awareness, equipped with knowledge and skills on entrepreneurship before graduation; 100% of universities, academies, universities, 50% of colleges and intermediate schools have at least 02 start-up ideas and projects of students and students are supported to invest from appropriate funding sources or connect with businesses and venture capital funds.

The goal by 2025 is to continue to promote propaganda and education to raise awareness, equip students with knowledge and skills about entrepreneurship; Strengthen facilities for student start-up support centers in universities, academies, universities, colleges and intermediate schools; 100% of universities, academies, universities, 70% of colleges and intermediate schools have at least 05 start-up ideas and projects of students and students are supported to invest from appropriate funding sources or connect with businesses and venture capital funds. Regarding the tasks and solutions to implement the Project, including: Promoting information and communication; Support for start-up training; Create an environment to support students to start a business; Supporting capital sources for start-up programs and projects of students and students; Improve mechanisms and policies to support students to start a business. At the meeting of the National Committee for Education and Training Innovation (MOET) and the National Council for Education and Human Resource Development (June 18, 2018), the Prime Minister asked the Ministry of Education and Training to direct higher education institutions to include entrepreneurship in specific curricula. and consider it an important training content. At the same time, universities are required to set specific goals for start-up activities in training. To implement the Scheme, on March 30, 2018, the Ministry of Education and Training issued Decision No. 1230/QD-BGDDT together with the implementation plan of the Scheme; at the same time, there is a document guiding training institutions to soon put the Scheme into practice and achieve the goals set by the Scheme. The Ministry of Education and Training has organized conferences to thoroughly grasp and implement plans to support students to start a business, as well as discuss solutions to effectively implement the contents of the Project. The Ministry of Education and Training has also asked universities, academies, pedagogical colleges and pedagogical intermediate schools to focus on implementing a number of tasks:

o   Develop start-up topics to be included in the training program in the direction of compulsory or elective in accordance with the school's practice.

o   Arrange staff and lecturers to be in charge of supporting students to start a business. Establish a department or center to support students to start a business on the basis of existing departments, departments and departments of the university.

o   Establish an information channel to provide materials on innovation and entrepreneurship, the school's learning resources for students. Organize communication about activities to support students to start a business, encourage students to propose projects and ideas to the university's startup support consulting department for advice and support.

o   Coordinate with businesses, invite experts to organize training courses, thematic talks, forums to improve awareness, knowledge and start-up skills for students. Organize the selection of feasible projects and ideas to support incubation at the university or connect to startup support centers in the area to support incubation, acceleration and investment connection.

o   Create a database of students' start-up projects and ideas after being supported, select feasible and creative project ideas to attend the National Startup Day for students at the regional level.

o   Study and support capital sources for start-up programs and projects of students according to the provisions of the Prime Minister's Decision No. 1665/QD-TTg dated 30/10/2017 on approving the Scheme "Supporting students to start a business by 2025"

Statistics of the Ministry of Education and Training have synthesized information data of 63 departments of education and training, 710 departments of education and training, built and completed a database system for information management of schools at all levels from preschool to high school with the following database components: Schools, classes, students, teachers, facilities, talents. Apply technology to high school graduation exams and university admissions (registration, online aspiration, virtual candidate screening, benchmark ,... announcement) across the country. The digital learning material repository built by the Ministry of Education and Training currently has more than 7,000 electronic lectures and more than 2,000 lectures on television (VTV7 and other educational television channels). In localities, digital transformation of education is being carried out and

promoted. Images and animations are integrated into the lessons to help increase the vividness and attractiveness of the lectures, creating interest and motivation for students. Although in the mountainous area, the teachers here are proficient in preparing lesson plans using computers, evaluating and commenting on students using electronic school reports,... It is easy to see that digital transformation in education in Vietnam is "immersing" into the country's digital transformation process. Applying technology to education brings positive values in the management, training and control of education quality. Digital transformation of education is an irreversible trend when education is increasingly developed and deeply integrated internationally, which is the right solution to help improve the quality of higher education in Vietnam.

III. Results and Findings

As one of the universities in the country pioneering in entrepreneurship, creating an ecosystem for developing startup ideas for students, since 2018, the University of Trade Union has associated digital transformation for entrepreneurship subjects into teaching in all faculties in the field of economics. Digital transformation in the university's entrepreneurship education contributes to the implementation of the Democratic Regulation, building a team of lecturers with ethical qualities, professional conscience and high professional qualifications, advanced and modern teaching methods and styles. It also helps lecturers have more information to promote their advantages, overcome disadvantages, and improve the sense of responsibility of lecturers in implementing the University's training goals.

Digital transformation activities in start-up education are regularly evaluated by the school for advantages and limitations in teaching activities of lecturers, in order to adjust plans, contents, teaching methods, propose solutions to prevent negativity, overcome limitations, contribute to improving training quality. At the same time, the application of digital transformation in teaching activities on entrepreneurship also helps faculties, departments and school leaders have an additional channel of information to objectively evaluate the teaching activities of lecturers, thereby having a plan to train and foster lecturers, etc innovate contents, programs, and management methods to improve the quality of training. After the implementation of the university's student survey on the content of digital transformation in startup education, a total of 5,604 survey forms with 74 lecturers were consulted. Proceed to enter the ticket, the data processing and synthesis of the results are carried out. With 20 criteria evaluated according to 5 levels of scale: 1 is Good; 2 levels of Good; 3 Medium levels; 4 Weak levels; 5 Poor levels. Criterion 21 is other comments. The results of applying digital transformation in entrepreneurship training for students can be considered in several aspects as follows (Fig 1)

Figure 1: Teaching associated with digital transformation

	Criteria	1	2	3	4	5	Good level or higher
1	Lecturers guide learning methods, **textbooks and reference** materials	3137	1848	461	97	57	89.02%
2	Lecturers inform about the form and method of learning assessment | before **the lesson**	3048	1950	442	96	64	89.25%
3	**Lecturers prepare appropriate** tools for the lecture.	2947	1923	575	99	56	86.96%

Source: Survey results of digital transformation activities at trade union universities (2017-2022)

Criteria for lecturers to guide learning methods, textbooks and reference materials with the number of comments from good or higher accounted for 89.02%; Criteria for lecturers to inform about the form and method of pre-study learning assessment with the number of comments from good or higher accounted for 89.25%; The criteria for lecturers to prepare appropriate tools for lectures with the number of comments from good level or higher accounted for 86.96%. (Fig 2)

Figure 2: Teaching methods of lecturers associated with digital transformation

	Criteria	1	2	3	4	5	Good level or higher
4	The lecturer presented the lecture clearly and easily understood.	2877	1828	653	163	78	84.03%
5	The lecturer uses a variety of teaching methods (lectures, discussions...).	2757	1887	753	140	65	82.90%
6	The instructor guides you through learning methods at the beginning of the course.	2854	1961	628	94	65	85.95%
7	Teachers use teaching aids effectively (projectors, computers...).	3070	1811	562	92	65	87.16%
8	Lecturers are attentive to answering students' questions.	3198	1710	512	110	69	87.66%
	Instructors encourage students to actively participate in the learning process.	3134	1827	489	90	60	88.59%
10	Teachers promote students' self-study.	3061	1842	543	86	64	87.62%

Source: Survey results of digital transformation activities at trade union universities (2017-2022)

Criteria for lecturers presenting lectures clearly and understandably with the number of comments from a good level or higher accounted for 84.03%; Criteria for lecturers using many teaching methods (presentations, discussions, etc.) with the number of times giving opinions from a good level or higher accounted for 82.90%; The criteria for lecturers to guide learning methods at the beginning of the subject with the number of comments from a good level or higher accounted for 85.95%; Criteria for lecturers to effectively use teaching facilities (projectors, computers, etc.) with the number of comments from a good level or higher accounted for 87.16%; Criteria for lecturers interested in answering students' questions with the number of comments from good or higher accounted for 87.66%; Criteria for lecturers to encourage students to actively participate in the learning process with the number of comments from good level or higher accounting for 88.59%; The criteria for lecturers to promote students' self-learning with the number of comments from good or higher accounted for 87.62%.(Fig 3)

Figure 3: Teaching content and assessment associated with digital transformation

	Criteria	1	2	3	4	5	Good level or higher
14	Lecturers use a variety of testing and assessment methods.	2835	1997	603	108	58	86.27%
15	Detailed assessment scale for each test content is clear.	2936	1936	559	104	66	86.98%
16	The instructor gives comments after each test.	2960	1854	595	127	64	85.96%
17	Fair test and evaluation results.	3206	1807	427	84	76	89.52%

Source: Survey results of digital transformation activities at trade union universities (2017-2022)

The criteria for lecturers to present the purpose and requirements of the subject clearly with the number of comments from good or higher accounted for 89.36%; Criteria for lecturers to present full lecture content in accordance with the teaching schedule with the number of comments from good level or higher accounting for 90.77%; The criterion of teaching content is regularly related to reality with the number of comments from a good level or higher, accounting for 86.56%. The criteria for lecturers to use a variety of testing and evaluation methods with the number of times giving opinions from a good level or higher accounted for 86.27%; The criteria for a detailed evaluation scale for each test content are clear with the number of comments from good or higher, accounting for 86.98%; Criteria for lecturers with comments and comments after each test with the number of times giving opinions from a good level or higher accounted for 85.96%; Criteria for fair inspection and evaluation results with the number of comments from a good level or higher accounted for 89.52%

Table 4: Students' opinions on the school's digital transformation
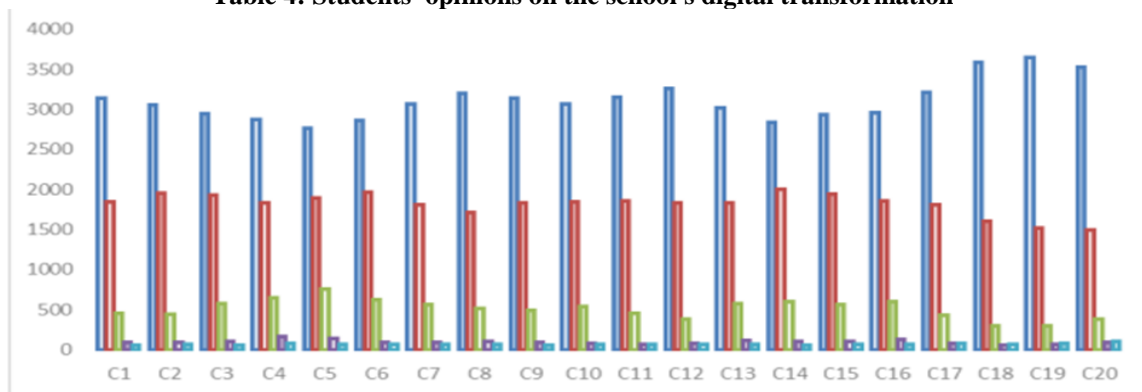
Source: Survey results of digital transformation activities at trade union universities (2017-2022)

In the opinion poll, in addition to the criteria (from C1 to C20) which are evaluated according to the level with the corresponding scale, there are also other criteria for opinions (called criterion C21). This criterion gives a lot of valuable information because it is the student's mind, the criterion that they can express their opinions most clearly, their very real opinions are valuable information for lecturers to better understand the aspirations of students, thereby promoting the advantages, limitations, and overcoming disadvantages in the application of digital transformation to teaching activities. The results of collecting feedback from students on teaching activities associated with digital transformation in the period 2017-2022 are used as a reference to help the management of faculty and department leaders, thereby improving the efficiency and quality of training in start-up education associated with digital transformation of the Trade Union University.

IV.   Discussion

Digital transformation has been creating many positive changes for the education sector in Vietnam, it creates a very tight system at institutions right from teaching to learning and management. The solution to promote digital transformation in education is

o   It is necessary to raise awareness and popularize ideas for each teacher, lecturer, and manager of the school to understand the importance of digital transformation and jointly build a digital culture in education. At the same time, it is necessary to foster and improve skills and professional skills in the application of technology for all teachers, lecturers and school administrators towards the goal of successfully implementing digital transformation in the education sector.

o   Completing the database in education. It is necessary to focus on implementing a system to share synchronous data in education, and gradually convert paper documents through electronic documents to make it more convenient in management.

o   Building network infrastructure and technological equipment. Network infrastructure and technological equipment must be renewed, especially in areas with poor connectivity to help narrow regional gaps. With this solution, it is possible to prioritize the use of the form of hiring services or mobilizing social resources.

o   Complete the legal system. Improving the policy and legal system plays an important role in education management as well as ensuring the interests of learners. Accordingly, it is necessary to agree on the following regulations:

Digital transformation in education by applying management software is a solution that has been applied by many institutions today. The software is integrated with outstanding features that will help bring an effective school management solution, helping schools to enhance their professionalism and manage student records and teaching records.

V.   Conclusion

One of the measures of the university's training effectiveness is the number of successful start-up students. Therefore, universities need to create a favorable environment and conditions for students to have the knowledge to start a business. The mission of the university, in addition to training, needs to form a startup ecosystem and prepare career skills, entrepreneurial thinking, and creativity for students. In order to start a successful business, in addition to the issue of capital, students first need to be fully equipped with knowledge, especially knowledge related to digital transformation and the use of artificial intelligence platforms. In the context of Industry 4.0, creative entrepreneurship must be associated with scientific research ability, with students who choose the path of creative entrepreneurship need to train and cultivate their research ability right from the time they study in school. Over the past time, the University of Trade Union has actively applied digital transformation

to help lecturers and students have more motivation to complete their learning plans as well as develop their expertise. The university is aiming to build all activities on the basis of digitalization in university administration. Develop a new set of regulations associated with digital transformation to assist stakeholders in the school's regular activities. The development of the school is always associated with the educational philosophy of student-centered, lecturers as the driving force and school management as the foundation, the University of Trade Union is gradually affirming its brand, position and prestige in the new era. the era of the nation's growth.

References:

[1]. Bui Nhat Quang. "Innovative startups in Vietnam in the context of the Fourth Industrial Revolution." Vietnam Social Science Magazine (2017): 35-52.
[2]. Dinh Van Toan, "University autonomy in the period of university model transformation: The experience of some universities in the world and implications for Vietnam." (2020).
[3]. Dinh Van Toan. "Governance innovation adapts to the Startup University model and policy implications for Vietnamese public universities." (2021).
[4]. Dinh Van Toan. "The management organization in the university is required to innovate university governance and innovative startups." (2020).
[5]. Le Thi Minh Hang, Ha Hoang, and Nguyen Son Tung. "The Impact of Entrepreneurship Training on Startup Intent." National Conference-Connecting Network Research Policy Supporting Enterprise Innovation. Labour and Social Publisher, Hanoi, Vietnam, 2022.
[6]. Nguyen Dinh Quang. "TRANSFORMING THE TEACHING METHOD OF ENTREPRENEURSHIP IN THE CONDITIONS OF DIGITAL TRANSFORMATION FOR GIA DINH UNIVERSITY STUDENTS." INNOVATION OF TEACHING METHODS AND STUDENT ASSESSMENT IN THE CONDITIONS OF DIGITAL TRANSFORMATION: 91
[7]. Nguyen Duc Khuong, Pham Truong Thi. "Hidden resources and competitive advantages of innovative startups in Vietnam."
[8]. Nguyen Quang, Ngo Quang Huan, Tran Nha Ghi recorded. "The relationship between business resources, dynamic capacity and performance of start-ups in Ba Ria-Vung Tau province." Journal of Economic Development 28.12 (2020): 05-21.
[9]. Report on the employment situation of alumni of the University of Trade Union (2017-2022)
[10]. Report on the recruitment needs of stakeholders for the accreditation of teaching programs, University of Trade Unions (2017-2022)