SOLUTIONS TO EFFECTIVE DIGITAL TRANSFORMATION AT NON-PUBLIC UNIVERSITIES IN THE CURRENT 4.0 ERA

Ngo Quang Son[1]
Vu Thi Thanh Minh[2]

[1]Nguyen Trai University
[2]Thanh Do University
Email: [1]ngoquangson2018@gmail.com; [2]vttminh@thanhdouni.edu.vn.

Abstract:

Digital transformation is an inevitable trend in Vietnam's non-public higher education today, especially for those that want to be promoted domestically and internationally, improve the quality of education and training, and attract learners. Digital transformation is to meet the new requirements of training high-quality human resources, who are capable of creativity, quickly absorbing science and technology levels in the world to serve the national development in the future. Not only have several non-public universities in Hanoi applied information and communication technology to improve the quality of education and management, recently, they also have boldly invested in digital transformation process, aiming to transform into a digital university, or a smart university model. The authors have analysed an effective management solution system to promote opportunities and overcome all challenges so that the digital transformation process in non-public higher education institutions takes place quickly, smoothly and sustainable success.

Keywords: *Non-public universities; Effective digital transformation; Solution; 4.0 era; Inevitable trend.*

1. Introduction

In the world, digital transformation began to be mentioned a lot around 2015, popularized in 2017. In Vietnam, digital transformation began to be mentioned a lot around 2018. The Prime Minister approved the Program Convert country numbers on 3/6/2020. Digital transformation is the next development of computerization, made possible thanks to the outstanding progress of breakthrough new technologies, especially digital technology. Digital transformation is the process of total and comprehensive change of individuals and organizations in the way of living, working and production methods based on digital technologies. Digital transformation in non-public higher education can be understood as the process of total and comprehensive change in the way of teaching, learning and management in non-public higher education. Digital transformation in non-public higher education is also an objective necessity for the following reasons: actively contributing to supporting university lecturers in offloading some tasks such as attendance and grading, using modern technology applications to animate lectures…Digital transformation helps students have effective learning materials, diversify learning forms and update task requirements quickly and conveniently. Digital transformation also helps non-public higher education

administrators to perform their work conveniently and quickly. It is for these reasons that non-public universities are actively implementing digital transformation, in order to improve training quality and affirm their brands.

2. Research overview

Digital transformation is a tool of the governance of an advanced higher education institution, a breakthrough solution in administrative reform... This is the sharing of many experts at the Seminar "*Digital transformation at universities" Colleges and Schools: Situation and Solutions"* organized by Hanoi University of Industry in collaboration with Vietnam Association of Universities and Colleges on January 31, 2023 in Hanoi.

Nguyen Binh Huy, Tran Hai Anh and Nguyen Huu Tam (Hanoi University of Science and Technology, August 10, 2023) studied *"Digital transformation - An inevitable trend in higher education in Vietnam today"*. Digital transformation is an inevitable trend in Vietnam's higher education today, because if universities want to be promoted domestically and internationally, want to improve the quality of education, training and management and want to attract people to learn to convert.

Phung The Vinh (2022) had an article: "*Digital Transformation in Universal Governance: International Experience and Practice of Vietnam*". Digital transformation is the application of digital technology to transform service and business operations. However, the application of technology is not just about using it for work, but also involves connecting data, linking processes, organizations and countries together on a digital platform.

According to Castro Benavides et al (2020), *"Smart Governance in a Global Complex Environment: Theory and Practice"*, if a university wants to survive over time in this transition, then universities learning must embrace digitization and digital transformation to fully exploit all the opportunities and potentials opened up by the multitude of digital technologies available, redefining operating models across the globe, value chain brought about by technology. This is no easy task and certainly a challenging task for universities. This challenge is increasingly pressing for universities to ensure that they have a competitive position in the global education market.

Nhat Hong with the post: "*Digital transformation in higher education: Many obstacles and challenges"*, October 11, 2022. Digital transformation in education is not only about renewing the method of updating equipment and technology, but also about culture and people. The digital transformation applied education era will open up learning opportunities at a lower cost and more effectively than in the past because schools will have to spend less to pay for issues related to digital transformation. The global COVID -19 pandemic has prevented traditional face-to-face communication, but also created a driving force to promote the digital transformation economy, including the higher education sector.

Gia My published the article *"Digital transformation in university"* on April 3, 2023. Not stopping at the application of information technology to improve the quality of education and management, recently, a number of universities in Ho Chi Minh City have boldly invested in digital transformation, moving towards the model of digital university, smart university. Digital transformation also helps to improve the competitive position, enhance the school's brand and create sustainable development to implement strategies and plans in the coming period.

Ngoc Mai (11/01/2023), there is research: *"Digital transformation of education to avoid the situation of the whole country turning into a university"*. Each university has its own culture and color, so there is not a specific platform that applies to all schools, but only a shared part. Digital transformation is one of the prerequisite tasks of universities and colleges. In fact, we are also behind businesses in digital transformation. If we don't change, in a very short period of time, all of our products will go out and no one will consume. For digital transformation, the

first must change is perception, down to reality at businesses to see how the changes are. If the leader changes, the subordinates change. In other words, if it changes from the perception of leaders, no matter how difficult the digital transformation will be, it will work. That is reflected in the fact that we bring software systems from leaders, leaders will move to lower levels such as departments, departments and students. We should have and should go in the direction of improving the "*digital capacity framework*" for organizations, businesses and citizens to be able to realize the goals of the digital transformation program. The government wishes to build a digital government, a digital economy and a digital society. Thus, if you want a digital government, you must have a digital organization, if you want a digital economy, you must have a digital business, if you want a digital society, you must have a digital citizen.

In recent times, studies on digital transformation have only focused on public universities, stating the current situation, advantages and disadvantages in public universities when implementing digital transformation in the process of digital transformation in teaching and school administration, since then the research has proposed solutions to manage digital transformation in teaching and administration of public universities. So far, there have been no studies that have deeply addressed the digital transformation management solution system in non-public universities. Therefore, this research topic has many novelties and has profound theoretical and practical value.

3. Research methods

3.1. Theoretical research method group

- Researching documents related to digital transformation in non-public universities in the 4.0 era

- Studying the directives of the education industry on digital transformation at non-public universities in the 4.0 era

3.2. Group of practical research methods

- Observation method

- Survey method by questionnaire

- Method of getting expert opinion

- Interviewing method

-Evaluation method, summarizing experience

3.3. Group of other methods

The topic uses analysis, comparison and synthesis methods; Mathematical statistical methods to process research results: using estimation methods to process the collected data and data from which there is a basis to draw scientific evaluations and comments.

4. Research results

4.1 Main advantages and disadvantages of digital transformation in non-public higher education

4.1.1. Main advantages of digital transformation in non-public higher education

Firstly, the focus of digital transformation in non-public higher education is the development of application software that can solve problems of teaching, learning and operating a non-public university so that it is more effective. More efficient, faster and more accurate. Currently, the digital transformation is very convenient because there are many good technologies, good infrastructure, good human resources, a team of professors, associate professors, doctorates... most of them are high-level intellectuals dedicated to the world.

The 13th National Party Congress affirmed that it is necessary to accelerate the national digital transformation, develop the digital economy on the basis of science and technology and innovation. Implementing the Party and State's guidelines on digital transformation is one of the basic tasks of non-public higher education. Digital transformation in non-public higher education has supported the continuing education and training process even during the outbreak of the COVID-19 pandemic.

Secondly, digital transformation has helped teachers and learners quickly adapt and use new methods, apply modern science and technology in teaching and learning, use quality assessment and matching tools in accordance with international practices to evaluate the results of

the achievement of educational innovation goals.

Third, digital transformation also helps lecturers build a system of E-learning lectures, multiple-choice question banks, exam questions, audio recordings, video recordings of lectures, etc. content the teacher wants to convey to the learners. Non-public university programs require students to complete a sizable amount of content including subjects that provide general knowledge, industry background knowledge and specialized knowledge. Every subject contains a huge amount of knowledge. Therefore, the teaching process of teachers often falls into a state of *"burning out lesson plans"*, because the time in class is not enough for the lecturer to convey all the theoretical content of the subject. But in the new era - the 4.0 era, teachers can fully apply the achievements of new science and technology in classroom management, division of lecture content, discussion content, self-study content and control, students' learning activities through kahoot.it, pollev.com applications, etc.

Fourth, digital transformation helps students look up course materials conveniently with huge data sources from other students at the same school or from other universities in Vietnam and around the world, very up-to-date knowledge, updated and open, very convenient in terms of time and independent of location. Students easily learn to improve their responsiveness and adapt quickly to society.

Fifth, digital transformation helps apply software in training management, assessment, building question banks, teaching by projectors, etc., but in order to really exploit the huge data source, access to with new knowledge updated and effective application of software to support teaching and learning, universities need a wide Internet network, students and lecturers need connecting devices, power systems, rooms.

4.1.2 Difficulties in digital transformation in non-public higher education

Firstly, the rapid development of science and technology affects all aspects of socio-economic life, causing inevitable changes in all fields and professions. Non-public higher education aims to provide society with high-quality human resources, meeting the needs of the times and international integration, so there must also be rapid and drastic changes. The first thing is to change awareness, non-public universities must be aware that digital transformation is an inevitable trend and a central issue in the current period to quickly implement it, creating opportunities for establishment, its position nationally and internationally.

Secondly, changing habits is also one of the difficulties, because both lecturers, students and administrators have been used to the real environment for many centuries. Switching to a digital environment is about changing habits, but changing habits is difficult, it is a long-term, gradual change.

Third, many new violations have also appeared along with the digital transformation process such as: the status of setting up a virtual Web site, impersonating, a Web site with distorted, reactionary content... not few and content changing day by day, hour by hour makes it very difficult for lecturers to control. Confidential information about exam questions, personal information, and lecturers' accounts are always at risk of being hacked.

4.2. An effective digital transformation solution system in non-public higher education

4.2.1. Solution 1: Non-public universities need to raise awareness and renew thinking about non-public higher education development in the overall development strategy of each non-public universities

In order to effectively take advantage of opportunities as well as overcome challenges from the industrial revolution 4.0, universities need to raise their awareness of the importance of the industrial revolution 4.0 and the change of the job market; on the mission of non-public universities in preparing high-level human resources and participating in labor market restructuring. For management agencies, it is also necessary to improve the capacity of state management and university administration, planning the network of higher education institutions; ensure financial sustainability and enhance transparency. Create consensus among

all levels, ministries, training institutions and non-public higher education stakeholders. Focus on reviewing and amending regulations on the responsibility of the university council's role in university governance, guiding and strengthening supervision and accountability of non-public higher education institutions, creating favorable conditions and environment, creating a legal framework for the relationship between non-public higher education institutions and enterprises.

4.2.2. Solution 2: Maintain continuity and adaptability of non-public university training activities. Innovating models, programs and methods of training in non-public universities

The COVID-19 pandemic has disrupted the traditional classroom model. All university training activities must be posted online.

In order to achieve this goal, the Non-Public Universities must meet the following conditions:

- All subjects need to be compiled with content that can be taught for both online (Online) and face-to-face (Onsite).

- Ensure to meet the minimum requirements for transmission lines, bandwidth, and necessary equipment. Have a financial aid or equipment loan plan for students.

- To 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 training environment.

- Establishing a working group on vocational colleges to determine standards and criteria; choose the implementation method; formulating and promulgating rules and regulations.

Training objectives need to change in the direction of promoting creativity and personal capacity development. Start-up-oriented training can be implemented according to the "5 in 1" model, in which the output standard with many new skills of citizens 4.0 and 5 components include: There are many new training programs with high interdisciplinary and transdisciplinary nature and many training programs associated with industry 4.0.

Innovating the way of leading and operating universities, implementing work in the direction of encouragement, ready to apply new products, services and models in the digital transformation process. Review and develop appropriate mechanisms and policies in the digital transformation process, well implement the protection of intellectual property...to encourage non-public universities to innovate and develop sustainable, while creating motivation for information technology experts, scientists, lecturers and students to actively participate in the digital transformation process.

4.2.3. Solution 3: Build a team of digital instructors that can use high technology and meet a highly interactive pedagogical environment, from which they will use teaching methods that use high technology and respond high pedagogical interaction with digital students. Accelerate the digital transformation process, welcome the application of new technologies.

Digital lecturers need to be equipped with skills in technology and pedagogical methods to implement the college, including teaching methods according to new approaches, operating methods of digital tools/digital training environment, how to compile digital documents, build lectures with high pedagogical interaction...

This is a long-term strategy, which needs to be prepared step by step when implementing digital transformation, through activities:

- Organize training courses: teaching with technology, teaching in mixed model, training on using digital tools and platforms...

- Organize the design/re-compile of subjects according to mixed teaching model, open learning model, lessons with high pedagogical interaction, etc.

- Promote the form of rewarding lecturers with excellent teaching achievements, forming a network of excellent lecturers so that they can guide colleagues in their department/subject. An important component of the collegiate process at universities is the blended learning model. This

model is student-centered, promoting self-study, self-research, and the ability to ask questions and discuss, helping students develop the necessary skills to meet the requirements of employers, practical response to modern industry.

To perform well the mixed training model, the following two requirements need to be met:

- Take advantage of digital training tools and platforms to provide knowledge continuously, anytime, anywhere for students.

- Provide opportunities for students to approach the real environment through co-training with businesses. With this approach, learners will experience new learning models: Learning by practical experience, learning by problem solving method, learning how to integrate into the training environment and working in reality in the future. future…

Digital transformation must ensure 4 factors, including: empowering lecturers; interact with students; organizational optimization and method innovation. Digital transformation at non-public universities is taking place at all three stages, including: planning; independently formulate strategies and implement innovations; monitor the impact of technology deployment. Building miniature studio models using new technologies, virtual classrooms, virtual laboratories, virtual devices, virtual libraries... under the support of smart devices. Research and apply AI technology, Chat GPT, especially in synthesizing learning information, useful suggestions for learners and teachers, creating conditions for learners to access standardized curriculum individually, in assessing the capacity and needs of learners, or used to overcome the shortage of teaching staff (for example, teaching foreign languages).

Students, lecturers and administrators need to regularly study and foster to improve their professional qualifications, ability to use information technology and foreign language skills to be able to successfully grasp and apply technology in teaching and digital transformation.

4.2.4. Solution 4: Digital transformation in scientific research activities at non-public universities

Currently, scientific research activities at non-public universities are shifting the focus to data warehouses (Big Data). To carry out collusion in scientific research, it is necessary to focus on building data centers and connecting platforms to form networks for domestic and international scientists to jointly solve specific professional problems. As follows:

- Built a data center to collect and accumulate sample data and experimental data in all fields. Through jointly solving problems using shared data sets, research works will be linked together, promoting cooperation, sharing results, and co-experimentation.

- Develop a network of scientific consultants: this will be the place where research proposals are publicly commented/evaluated, where businesses place their research papers, where research proposals are received and funding is provided.

- Forming start-up centers that are places to incubate potential research results and trade exhibitions, introduce startup products, connect stakeholders in the ecosystem, and be ready for investment cooperation. invest in large-scale production.

4.2.5. Solution 5: Expand digital students, expand access to technology for digital students

In the future, with the availability of digital classes, digital documents and open repositories, learners of non-public universities will no longer be constrained by age. Anyone, anywhere, can do anything to study and receive a diploma. Limits on campus size or geographic distance will be removed. Since then, training targets and contributions to socio-economic development have also increased.

To do that, we need:

- Establish interactive technology laboratories with all necessary equipment and support tools.

- Building extracurricular clubs, popularizing basic technology knowledge, necessary for new students to enter the school.

- Integrate virtual reality, augmented reality and mixed reality into the teaching environment.

- Minimizing the release of traditional books/documents.

- Open Zalo address to answer general questions and technical support.

4.2.6. Solution 6: Analyze and store data about students

An effective activity during the implementation of the non-public universities is the ability of students to analyze data. Specifically, from the route, progress, as well as progress in the learning process of students are automatically tracked and analyzed. This is an important foundation for personalized learning. From this classification result, students can adjust their own pace, learning intensity or change subjects/sectors/directions to suit themselves. Students in disadvantaged groups will receive advice and support directly from the school. The system also analyzes the factors that make the difference in learning outcomes, as a basis for adjusting training activities later.

Some points to especially note:

- Data privacy: must determine the type of student or faculty data that the system is authorized to collect, analyze, and evaluate.

- Need AI support in data mining.

- The real effect of academic analysis: the reliability of the assessment, the negative impact when the assessment results are wrong.

- Increased costs for storage, installation, operation, maintenance...

4.2.7. Solution 7: Replicate the model and spread digital transformation

Once digital transformation is completed, non-public universities can replicate the model and support digital transformation to other non-public universities and related organizations in the field of education.

Support activities may include:

- Conveying methods and approaches to colleges.

- Sharing digital resources, technology, digital platforms, data warehouses, data centers...

- Coaching/co-training trainers/officers.

- Open education and training: exempting credits for high school students who meet the conditions or have studied through the corresponding subjects on the digital education system.

Building information systems and databases of universities to serve e-management on cloud-based infrastructure; implementing regulations on information sharing through the network system between domestic and foreign universities. Forming a center for information and forecasting of development trends of domestic and international higher education. Applying digital technology to management activities, work administration, and professional management applications. Implement synchronously the circulation of documents on the network environment through the system of websites and portals; application of digital authentication and digital signature to perform the work (except for confidential documents as prescribed); invest in building a big data system (Big data) enough to meet the work of each university in particular and the higher education system in general.

There must be solutions to ensure safety and network security, which is the key to successful and sustainable digital transformation, and is an integral and integral part of the digital transformation process.

4.2.8. Solution 8: Build digital transformation infrastructure. Developing applications for the administration and administration of non-public higher education

The ability of colleges to succeed in non-public higher education requires digital infrastructure. Digital infrastructure includes logical infrastructure and physical infrastructure. The logical infrastructure is the data warehouse. Physical infrastructure includes connection network, strong bandwidth, modern pedagogy, scientific research, learner experience and most importantly, tools/platforms to support deployment. These tools, in the form of technical infrastructure, must be stable and reliable enough to operate the requirements and features of the new generation of non-public higher

education.

For non-public higher education, it is necessary to establish a number of data centers such as:

- Student data center: is the data of all students, from the time of registration to the school until graduation.

- Data center of lecturers: is the data of all administrators, lecturers and researchers in the university. It records the entire working history of the lecturer from the time he started working until he stopped working at the school.

The phrase "transformation" literally means change, first of all changes in the organization's information technology infrastructure such as hardware capacity, computing capacity and technology mastery:

- Hardware power is reflected in the volume of smart devices, high transmission bandwidth, storage capacity...

- Computing capacity shown in server clusters, the ability to respond to computations on large volumes of data in minimal time.

- Technology mastery level: AI, IoT, Bigdata, information security are topics that need attention. Much of the process and application of digital transformation is related to these four areas.

- Strong bandwidth is a key requirement of digital infrastructure, however, not everyone or from any location can have a connection. Therefore, colleges need to pay attention to the Mobile segment (which is 4G / 5G connection, is to provide experience on mobile devices) to ensure that teaching and learning is seamless. In addition, special subjects in remote and isolated areas or blind/hearing-impaired learners also need attention.

On the common data platform are supporting application systems for administration and administration, these systems include digital management applications - digital signatures, electronic offices, statistical data serving university ranking, report building, management work such as reward, ranking analysis, etc.

Non-public universities need to invest in building and developing information technology infrastructure to serve the digital transformation quickly and conveniently.

4.2.9. Solution 9: Strengthen training and use of high technology to meet the digital transformation environment in non-public higher education

One of the biggest obstacles to the college process is the delay or inability to adapt to changes in time: lecturers are not willing to change pedagogy, staff do not adapt to digital workflows, etc. Fear of change is an eternal problem, change in the technology age is even more frightening because of the lack of technological knowledge/skills, lack of confidence in the digital process.

During the COVID-19 pandemic, teachers have more or less experienced using Zoom, Google Meet, Microsoft Team, PowerPoint or Email/Web software to teach online.

One of the most important skills for all students studying at non-public universities is to learn how to learn to serve the digital transformation of non-public higher education.

Our era has gone from a period of lack of information to an age of information explosion, digital explosion, from sitting for weeks reading in the library to sorting through Google search results.

4.2.10. Solution 10: Renovate the connection model between non-public universities and enterprises. Strengthening international cooperation and integration in training

It is necessary to establish a high-level overall model on the basis of establishing a common cohesive model with many forms in a tight, interoperable and supportive system. A non-public university provides training and technology transfer, or engages in training, research and implementation. From this overall model, establish a specific and separate model, such as linking in the form of non-public university training while studying and working; theoretical training at non-public universities, skill practice at enterprises; training according to the order of the enterprise; expanding training

lecture halls from non-public universities to enterprises,...

International cooperation and integration create opportunities for students to participate in exchange programs or study abroad and have the freedom to develop personally; allowing lecturers to learn management and educational methods from international universities and helping partners understand non-public higher education in Vietnam; creating opportunities for transnational scientific research cooperation; improve quality in the direction of approaching regional/international standards in management, training and research, and at the same time can create a competitive labor source, reaching to export high-skilled labor.

5. Discussions

For non-public higher education, digital transformation is all about transforming what it takes to be able to launch non-public higher education online. There is no specific formula for this process, but it is possible to apply the non-public higher education performance evaluation frameworks as well as the non-public higher education quality assurance frameworks to guide the orientation. The role of leadership, organization, coordination and resource mobilization at the system level will be the key to determining the shape of the new non-public higher education.

In the context of the current Industrial Revolution 4.0, digital transformation in non-public universities will focus on three main contents:

(1) Digital transformation in school administration;

(2) Digital transformation in teaching, learning, testing, assessment, scientific research, international cooperation, printing, publishing textbooks, documents...;

(3) Development of digital learning resources.

In the coming time, non-public universities will have specific plans to strengthen the implementation of digital transformation, including changes in the legal basis; focus on

digitizing management information, creating large sets of synchronous and interconnected databases; building a number of digital technology application models in the teaching and learning space; converting national and international seminars to online form and still ensuring the plan…In essence, digital transformation does not change the core values or model of a non-public higher education institution. establishment, but merely the transformation of core operations through technology and digital platforms and at the same time, seizing the opportunities they present. Digital transformation in non-public higher education must start with teaching and learning, which is a change in perception, creating a digital learning environment and digital learning materials. Changing teaching and learning methods, thereby forming digital students and digital teachers. Digital transformation in non-public higher education is a process of changing the traditional method of higher education with modern higher education methods, including facilities and educational methods, teaching methods, educational management methods, making the most of technology towards high-quality non-public higher education. For non-public higher education, digital transformation will bring opportunities to apply technology to create rapid changes in model, organization and teaching and learning methods.

Digital transformation in general and digital transformation in non-public university administration is not about innovation or technology, it is also about culture and people. Through the digitization of knowledge and experiences, both teachers and students can improve their skills, with a common goal: to create a more engaging and effective educational process.

6. Conclusion

Digital transformation in higher education in general and non-public higher education in particular plays a key role in the country's development. The process of digital transformation in non-public higher education in

Vietnam is taking place at a fast pace, receiving attention, close direction and investment from the Government and the Ministry of Education and Training of Vietnam. However, the gap in infrastructure, resources and science and technology is the main reason why Vietnamese non-public higher education institutions have not been able to carry out digital transformation in a complete and uniform manner. The process of digital transformation to take place successfully needs supporting policies of the State, as well as the determination of leaders, lecturers and students to overcome difficulties and challenges related to digital transformation. Therefore, taking advantage of opportunities and overcoming difficulties and challenges will facilitate the digital transformation process in non-public higher education and more efficient.

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GIẢI PHÁP CHUYỂN ĐỔI SỐ HIỆU QUẢ Ở CÁC TRƯỜNG ĐẠI HỌC NGOÀI CÔNG LẬP, TRONG THỜI ĐẠI 4.0 HIỆN NAY

Ngô Quang Sơn[1]
Vũ Thị Thanh Minh[2]

[1]Trường Đại học Nguyễn Trãi
[2]Trường Đại học Thành Đô
Email: [1]ngoquangson2018@gmail.com; [2]vttminh@thanhdouni.edu.vn.

Tóm tắt:

Chuyển đổi số là xu hướng tất yếu trong giáo dục đại học ngoài công lập của Việt Nam hiện nay, bởi nếu các trường đại học ngoài công lập muốn thăng hạng trong nước và quốc tế, muốn nâng cao chất lượng giáo dục, đào tạo và quản lý, muốn thu hút người học thì phải tiến hành chuyển đổi. Chuyển đổi số chính là để đáp ứng được yêu cầu mới của việc đào tạo nguồn nhân lực chất lượng cao có khả năng sáng tạo, tiếp thu nhanh trình độ khoa học công nghệ trên thế giới phục vụ cho công cuộc phát triển đất nước trong giai đoạn hiện nay. Không chỉ dừng lại ở việc ứng dụng công nghệ thông tin và truyền thông để nâng cao chất lượng giáo dục, quản lý, thời gian gần đây, một số trường đại học ngoài công lập tại Thủ đô Hà Nội đã mạnh dạn đầu tư cho quá trình chuyển đổi số, tiến tới mô hình đại học số, đại học thông minh. Bài viết phân tích hệ thống giải pháp quản lý nhằm phát huy cơ hội và vượt qua mọi thách thức để quá trình chuyển đổi số trong các cơ sở giáo dục đại học ngoài công lập diễn ra nhanh chóng, thuận lợi và đem lại thành công bền vững.

Từ khóa: *Các trường đại học ngoài công lập; Chuyển đổi số hiệu quả; Giải pháp; Thời đại 4.0; Xu hướng tất yếu.*