

DIGITAL TRANSFORMATION IN HIGHER EDUCATION: CHALLENGES, OPPORTUNITIES AND THREATS

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Abstract

The digital transformation of Indonesian education is difficult to avoid with the current situation and conditions. Inevitably, every stakeholder in the education sector and the government must be ready to face challenges, moving towards the digitalization of the world of education. The industrial revolution 4.0 has touched almost every aspect of our lives. More than 3.5 billion people have access to the internet and it is estimated that more than 5 billion have some kind of mobile device and half of them are smartphones. This level of connectivity has affected the way people engage with others, get news, and see the world around them. Therefore, it is not surprising that this digital transformation trend has also greatly impacted the education industry. In higher education digital transformation has impacted classrooms and the way these teachers reach their students. The emergence of the COVID-19 pandemic has limited teaching and learning activities in higher education. Inevitably demanding that many educators use information technology to help them overcome these conditions.

Keywords: transformation digital, challenges, opportunities and threats

Introduction

Currently the world is being hit by the COVID-19 pandemic and Indonesia is also not being missed by this pandemic. The characteristics of Covid-19, where the transmission process between humans occurs through droplets, has drastically reduced physical encounters. Humans must keep their distance and avoid crowds when doing activities outside the home. Based on these conditions, by the government, educational activities are required to be carried out

online or using electronic learning facilities (e-learning). The goal is so that our young generation is not affected by the severe COVID-19 pandemic. Other activities (business, government, organization, etc.) inevitably adapt and begin to take advantage of digital facilities. When the situation changes to a situation that focuses more on the use of digital technology, digital transformation is an unavoidable phenomenon. Although the definition of digital transformation specifically has not been agreed upon by researchers, almost all process activities carried out by humans are transferred to digital media. Digital transformation, in general, can be interpreted as a radical process that occurs in organizations in utilizing technology, human resources, and business processes that cause the business performance of the organization to change drastically. Processes or activities that are usually done physically are drastically reduced. The pressure to switch to digital media so that processes/activities can continue while surviving in this pandemic situation is increasing.

After knowing the factors that drive an organization to digital transformation, the purpose of digital transformation is an important thing to discuss. If the driving factors for digital transformation have been experienced by the organization, but the organization does not align what is happening with the goals of the organization, then digital transformation will be a futile activity. The main purpose of carrying out digital transformation by an organization is related to the digital readiness of the organization. That is, organizations that want to ensure that they are ready to enter the digital world and are ready to change when needed. Some things that can be seen as evidence of the digital readiness of the organization are producing better product innovations, exploring and developing new disruptive business models in order to remain competitive and generate profits. Another thing that is the goal of digital transformation is to increase the distribution channels or businesses owned to be more digital, get closer to consumers through digital channels so that they can better understand their desires. No less

important is sending services or products digitally so that customer satisfaction increases and triggers them to reuse the products or services produced.

Transformation itself is a structured change process that is planned to achieve noble goals. Digital transformation in higher education refers to the process and strategy of using digital technology to rapidly change the way institutions operate and serve students, lecturers, employees, industry, parents, and the government. said that the digital transformation of education has been carried out since 20 years ago. However, the progress is very slow because most universities still do not realize the importance of using digital technology in the curriculum. According to the Minister of Education and culture, the current pandemic is accelerating this transformation, where universities are required to adopt online learning methods. In addition, the Directorate General of Higher Education (Ditjen Dikti) is also accelerating digital transformation through the Merdeka Campus program. Futhermore, in general, digital transformation in universities is to produce the best and easy services for students and partners. Digital transformation must be carried out immediately because technology is increasingly pampering students with a student experience that is easy to use and fast-paced. With the Covid-19 pandemic, it requires all institutions including universities to prepare and innovate to be more competitive through digital transformation.

Starting the Acceleration of Digital Transformation in Higher Education

In accelerating the transformation on campus, you must pay attention to the following things so that the transformation of education on your campus goes well. 1). Equipping the Campus Civitas with Digital Skill. The key to providing the right digital environment is staff members who are trained and fully involved in designing and providing faculty and students with an understanding of the use of technology. For this reason, it is important for universities to work together with IT consultants

who are ready to deliver digital-based universities. Managing campus bureaucracy is certainly not an easy job. However, moving to digital is a must so that universities can survive in this digital era. 2) Collaboration of All Campus Community. Apart from training staff, turning a digital-based university that runs smoothly is a huge task. It takes a holistic organizational approach, which involves collaboration between students, curriculum teams, management, the chancellor and the campus senate. After knowing what digital transformation is in higher education and its benefits, and also knowing the steps when starting to transform to digital, our next step is to discuss some of the actions that campuses can take to achieve this digitalization acceleration indicator.

1. Formulating the Digital Transformation Curriculum

The digital transformation curriculum design must be immediately prepared by universities, with the end being successful in surviving from tight or late competition. The digital transformation strategy starts from preparing human resources and good culture, then preparing data and technology for transformation. The government through the Ministry of Education and Culture and universities need to immediately prepare curriculum designs to anticipate future jobs that are not currently known and the future education desired by our young generation and parents.

2. Keep Thinking Link and Match Curriculum

Universities still have to think about linking and matching the curriculum with the needs of today's industrial world. Even though entering the digital world, besides that, the purpose of higher education is also to prepare quality human resources that are in accordance with the world of work or industrial needs.

3. Have a Distance Learning Platform

Educators be familiar with Distance Learning, or online learning. With this e-learning platform, students can experience

learning with a richer experience and can be done anywhere and anytime.

4. Setting up an Online Admissions Platform

In addition to online learning, the next thing that must be digitized by universities is the online SPMB (New Student Admission System). Because the beginning of everything that is done by universities is the process of accepting new students. So, if the acceptance has been digitized from the start, the enthusiasts will be confident in the campus.

5. Facilitate Online Student Payments

Many occur in various universities experiencing long queues when tuition payments arrive. In fact, students have to bring cash in front of the academic office, especially during a pandemic like the current manual payment will cause crowds, of course it is not allowed. Now, if the campus implements online payments, it is certain that students can be more comfortable and safer when making payments. This online payment, apart from registering new students, also greatly facilitates the campus community, especially students, in paying tuition bills such as tuition fees, building fees, books and others.

6. Hold Campus Webinar Activities

Universities can hold various webinars to increase knowledge for the campus community as well as open to the public. Webinar itself is an abbreviation of web seminar, which is a seminar conducted through internet-based applications such as Zoom, Google Meet, Jitsi and others.

7. Work from Home and Remote Coordination

In addition to teaching and learning activities, higher education institutions also have so many activities to support the smooth running of educational activities. Such as campus administration management, coordination, research and community service that need to be carried out and coordinated well by the staff and the campus community. People certainly do not want conditions like this to last too long and hope and pray that the Covid-19 pandemic will soon pass and can return to normal activities. And can take lessons or positive things for progress in any field, including learning in college. That's a review of the acceleration of digital transformation in universities. How, your campus. You inevitably have to transform as soon as possible.

Common Obstacles to Digital Transformation in Higher Education

The digital transformation of higher education is one of the important things that are difficult to avoid by education stakeholders in Indonesia. Moreover, the Covid-19 pandemic has forced higher education institutions to continue to prepare and innovate to be more competitive in the teaching and learning process with a distance learning system. In addition, universities must also carry out digital transformation because this is a structured change. Digital transformation in higher education refers to the process and strategy of using digital technology to rapidly change the way institutions operate and serve students, lecturers, employees, industry, parents, and government to be better than before. In other words, a university can be said to be successful in carrying out digital transformation, if it is able to use advances in information technology to create new business models in the world of education. Several universities abroad have applied this since the last few years, before the pandemic. Although it has many benefits, carrying out digital transformation in higher education is not easy because there are many obstacles. The following

are common obstacles that are often faced when carrying out digital transformation in universities.

1. Human resources

The first obstacle that is often faced by universities in carrying out digital transformation is human resources that are considered not ready. This relates to the university's efforts to provide staff members who are trained and fully involved in designing and providing an understanding of the use of technology to lecturers and students. One way to overcome this problem can be collaboration between stakeholders in the university environment and IT consultants who are ready to deliver campuses to be digital-based. At this stage, at least a basic understanding of the digitalization process in education can be provided to all relevant members.

2. Funds and technology used

Funding issues can also be another obstacle for universities that want to carry out digital transformation. Of course, the amount of these funds will affect what technology will be used later. For this problem, the government through the Directorate of Learning and Student Affairs, Directorate General of Higher Education has opened opportunities for digital module innovation funding assistance in 2021. The funding assistance is aimed at universities in Indonesia to develop digital module innovations in academic study programs. The government is also reported to have budgeted funding for the Independent Campus Competition Program (PKKM) of up to Rp500 billion. This program is expected to accelerate the process of digitizing higher education and achieve future-oriented learning.

3. Technology access

Another obstacle in the digital transformation process in higher education is the unequal access to technology services. Because, so far access to technology services seems to have been running in a number of areas, or only big cities in

Indonesia. This can be seen from several obstacles for people in disadvantaged, frontier, and outermost areas. This gap can be seen in the infrastructure of the Internet network and other supports, such as electricity and university facilities.

To overcome this, cooperation is needed between Indonesian education stakeholders and a number of parties, including qualified information and technology service providers. Atiha and Nuwa (2020) explain the world of distance education using a network that can be done by students and teachers with parental guidance at home in educational activities. This is as a transfer of information and receive one another. It is appropriate to meet face to face but use tools as a meeting or it can also be called digital interactive (Sadikin & Hamidah, 2020). There are components used by digital citizens in education, including: (1) digital facilities; (2) running system; and (3) the content or content of the learning carried out (Hidayat et al., 2020; Khunaini & Sholikhah, 2021). This change in education to online can be said to be the transition of a person into a digital figure or digital citizenship. Digital for the education sector is a manifestation of the implementation of distance education. In this case, the paradigm shift in the world of education emphasizes the direction of digitization in carrying out learning activities. Where the paradigm shift that occurs is starting from information, computing, automation, and communication, all of which lead to digital citizens in the world of education, especially students to find out all information on their own, ask questions or formulate their own problems, are able to think analytically, and emphasize the importance of collaboration and cooperation. collaboration in solving problems. Digitization in the world of education has widely circulated supporting applications or platforms in carrying out learning activities. Abidin, Rumansyah, and Arizona (2020) explain the platforms that have been used and are effective, such as google-classroom and Edmodo.

Digital platforms in the education sector actually have other platforms, such as WhatsApp, Facebook, Instagram, and

others. The platform requires internet network support to connect and its devices such as tablets, android phones, and laptops or computers (Firman & Rahman, 2020). It should be noted that the Covid-19 situation in the world of education can be said to be a necessity for the use of technology. Previously, it was still conventional, now like it or not, it is digital. The technology boom occurs because of digitalization which requires all activities, including in the world of education, to use various kinds of technology used in learning. Learning must continue in the current situation. However, according to (Atsani, 2020) explaining that there is a burden for teachers and students to be physical and mental pressure in the transformation to digital, teachers must be more creative through the media and adjust the needs of students in learning so that learning objectives are achieved and have quality. The gap between the necessity of being digital citizens for education and the readiness of teachers and students still exists, so that in this case teachers and students must be able to collaborate to become digital citizenship. Therefore, in this study, it is intended to determine the function of digital citizenship in carrying out educational activities in the Covid-19 situation that mutually utilize digital technology as a learning tool in achieving educational goals. Where later it will definitely have an impact on the results of learning activities and student learning outcomes.

The Era of Educational Transformation and Digital Technology

The emergence of the COVID-19 pandemic has limited teaching and learning activities in schools. Inevitably demands that many schools and teachers use information technology to help them overcome these conditions. Education as part of human endeavor, cannot be separated from the existence of the above changes. Education needs to welcome the era of change for looking forward to the future. The era of change called the digital era, means requires us to prepare everything.

Is this digital era an opportunity or an opportunity? opportunity, or be our challenge? That's why, people need to prepare education that brings students to be willing and ready to learn in entering the digital era, namely in an atmosphere and process that is able to teach students in ever-changing situations and learning experiences it becomes meaningful to the learner. Dramatic changes in educational applications have undergone expansion in information technology practice around the world (Seels & Richey, 1994). Learning in the digital era is an opportunity or opportunity for learner when he is able to utilize the new technology. Capability to adapting to new technology is very necessary for students. For That's why it takes creativity to find new information through technology digital. Learners who have high literacy skills in the field of technology just call it digital technology, they really enjoy in use this technology to find and trace all information needed for learning purposes. Thus, students will obtain a number of valuable information to meet their learning needs and it will continuously seek and find the information it needs. Also, this dimension of information technology practice tends to broaden improvement performance or student performance. Better performance or learning outcomes expected to be achieved by learners through the utilization of technology education use this technology to find and trace all information needed for learning purposes. Thus, students will obtain a number of valuable information to meet their learning needs and it will continuously seek and find the information it needs. Also, this dimension of information technology practice tends to broaden improvement performance or student performance. Better performance or learning outcomes expected to be achieved by learners through the utilization of technology education.

On the other hand, if this is not done, students in the digital age faced with real problems they may not be able to apply that knowledge. Learners who lack skills is very difficult to use their time in trying to find and find the information needed for the benefit of their learning tasks. The learner will spend a

certain amount of time just finding a little necessary information related to their learning tasks. Learner even lost most of the time just to try and find and find the required information caused by the lack of literacy skills. This is a challenge for them. students, in the face of the digital era. Learners need to do adaptation in the face of this new era of technology. Based on- above, students who have literacy skills or abilities information will be able to manage its time to seek and find all information. He has the opportunity and the opportunity to learn more in apply the learning experience. To get real experience and connecting with an ever-evolving world, learning must be emphasizing the development of learners and learning is directed to more mean.

Conclusion

Digital transformation in higher education refers to the process and strategy of using digital technology to rapidly change the way institutions operate and serve students, lecturers, employees, industry, parents, and government to be better than before. In other words, a university can be said to be successful in carrying out digital transformation, if it is able to use advances in information technology to create new business models in the world of education. Several universities abroad have applied this since the last few years, before the pandemic. Although it has many benefits, carrying out digital transformation in higher education is not easy because there are many obstacles. Digital transformation must be carried out immediately because technology is increasingly pampering students with a student experience that is easy to use and fast-paced. With the Covid-19 pandemic, it requires all institutions including universities to prepare and innovate to be more competitive through digital transformation.

References

- Abidin, Z., Rumansyah, & Arizona, K. (2020). Pembelajaran Online Berbasis Proyek Salah Satu Solusi Kegiatan Belajar Mengajar Di Tengah Pandemi Covid-19. *Jurnal Ilmiah Profesi Pendidikan*, 5(1), 64–70. <https://doi.org/10.29303/JIPP.V5I1.111>
- Atsani, K. L. G. M. Z. (2020). Transformasi Media Pembelajaran Pada Masa Pandemi Covid-19 (Transformation Of Learning Media During Covid-19 Pandemic). *Al- Hikmah: Jurnal Studi Islam*, 1(1), 82–93. <http://ejournal.kopertais4.or.id/sasambo/index.php/alhikmah/article/view/3905>
- Firman, & Rahman, S. R. (2020). Pembelajaran Online Di Tengah Pandemi Covid-19. *IJES*, 02(02), 81–89.
- L. Dormehl, “Tomorrow’s jobs: 7 future roles that will exist in the age of automation,” *Digital Trends*, 2019. [Online]. <https://www.digitaltrends.com/cool-tech/7-jobs-that-will-exist-age-automation/>.
- R. Morakanyane, A. Grace, and P. O’Reilly, “Conceptualizing digital transformation in business organizations: A systematic review of literature,” 30th Bled eConference Digit. Transform From Connect. Things to Transform. our Lives, BLED 2017, pp. 427–444, 2017
- Seels, B.B & Richey, R.C. (1994) *Instructional Technology; The Definitions and Domains Of The Fields*. Washington, DC: AECT