



Educational Transformation : Challenges and Opportunities in the Digital Era

Anita Chandra Dewi^{1*}, Wahyuddin Rahmat², Muh Syawaluddin³, Nur Azizah⁴,
Reni Damayanti⁵, Nur Amaliah Safitri⁶

¹⁻⁶Faculty of Engineering, State University of Makassar

Corresponding Author: Anita Candra Dewi anitacandradewi@unm.ac.id

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ABSTRACT

Digital technology has completely changed the educational landscape, changing the way we learn, access information and interact with the world around us. The focus of research that the author discusses is the challenges and opportunities in the digital era to face educational transformation. By using literature studies by conducting library studies to sharpen the analysis with the support of various sources that have theoretical connections. With the aim of finding out the challenges and opportunities in the digital era to face educational transformation.

INTRODUCTION

According to Shepherd (2011) the digital era is an era that can be described by the existence of technology that can increase the speed and magnitude of the circulation of knowledge in the economy and society. The Digital Era can be considered as the development of an evolutionary system where the turnover of knowledge is not only high, but also increasingly beyond human control, making our lives increasingly difficult to manage. The social implications of the Digital Age are enormous and will increase as the function of technology becomes more knowledge-based.

The digital era is also known as an era that continues to develop rapidly, as stated by Hajri (2023) that the digital era continues to develop rapidly, education faces significant challenges as well as tempting opportunities starting in the 21st century. Digital technology has completely changed the educational landscape, changing the way we learn, access information and interact with the world around us. In this context, it is important to understand the role of digital technology in educational transformation and the challenges and opportunities in this educational transformation.

Aulia (2023) states that digital transformation in the education sector is the process of using technology to bring about change with the aim of improving the quality and effectiveness of learning, facilitating accessibility, and helping students prepare themselves in a world that is increasingly connected digitally. The learning process in the digital era can use various software, applications and other electronic media.

There are many efforts made by the government to keep up with the flow of this digital era, one of which is the independent learning program. Quoted from a blog written by Aulia (2023), the Independent Learning Program is a program launched by the Indonesian Ministry of Education and Culture, Research and Technology in 2020 to accelerate the transformation of national education by utilizing digital technology. This program includes increasing teacher competency, developing an adaptive curriculum, and using information and communication technology in learning.

And there are many opportunities offered by this digital era, one of which is ease of access and flexibility of learning. In the sense that the transformation of education to be technology-based allows students to learn anywhere and at any time. This gives students the flexibility to study at their most convenient time and place. Apart from that, digital education also makes it easier for students in remote areas to access quality education.

But don't be lulled by all the opportunities that the digital era can provide, because the era of digitalization has challenges as well as opportunities that can be felt. Education can develop if there is innovation and can always collaborate to face changing times. If the education system in a country is unable to adapt to the needs of the times, its quality will lag far behind. Therefore, adaptation to all new things is very necessary. If someone is slow to adapt, it could be that that person will be left behind following the transformation.

Apart from that, another challenge according to Triyanto (2020) is the uneven distribution of infrastructure and access that supports the digitalization process, especially in remote areas.

And it is difficult to adapt to such rapid changes. The process of transitioning education to technology-based happened so quickly, that many people felt shocked because they were not used to using technology.

Overcoming this challenge requires comprehensive, integrated and collaborative efforts between government, society and educational institutions. Indonesia is expected to be able to carry out the process of digitizing education in order to prepare the younger generation to compete on the international stage and improve the quality of education. By optimizing the potential of technology in education, the quality of learning can improve significantly despite the many challenges that need to be faced. Therefore, there needs to be a synergy between the use of technology, learning methods and regulations that have proven to be effective in order to achieve Indonesia's educational goals and avoid bad things that will erode the morale of the younger generation.

METHODOLOGY

This research aims to find out the challenges and opportunities in the digital era to face educational transformation. This research uses literature studies by conducting library research to sharpen the analysis with the support of various sources that have theoretical connections. Arikunto (2009) argues that literature research, not quantitative research, is based on contextualism and event organism views and the context of qualitative analysis must of course be stated in a predicate which refers to a statement of circumstances, a measure of quality.

Quality measures are also mentioned in other books that focus more attention on forming a theory of substance based on concepts that arise from empirical data, meaning that in this research we are not directly involved in the object of field research but are looking for a theory to ensure that there is a theory about the challenges. and opportunities in the digital era to face educational transformation.

The focus of the research that the author will discuss is the challenges and opportunities in the digital era to face educational transformation. This is because the digital era is an era of very fast development, which of course provides many promising opportunities, but behind these opportunities there are also challenges. Therefore, researchers want to thoroughly examine the opportunities and challenges of educational transformation in the digital era.

The data sources for this research are books, journals related to educational transformation, and involve digital era theories which will be combined with challenges and opportunity facts. As explained by Sugiyono (2009), the data collection method used to obtain research data is with documentation. Documents are records of events that have passed, whether in the form of writing, drawings, or someone's monumental works.

DISCUSSION

a) The Role of Digital Technology in Educational Transformation

According to Ghufron (2018), the impact of this revolution also gave rise to new jobs and jobs that were previously unthinkable. Where there will be changes in the 21st Century, including connected transportation and information in the world, changes in income and new jobs due to economic growth, and global competition.

In the world of education itself, there has been a shift in orientation and it is a challenge in itself to produce graduates who are ready to face the digital era. According to 2016 McKinsey research, the impact of technology towards industrial revolution 4.0 in the next five years will see 52.6 million types of jobs disappear or at least experience a shift. Harahap (2008) believes that B for Indonesia is a challenge that must be faced considering its dense population and the need to prepare ready educational output.

In line with this, the Ministry of Education and Culture explained how to build a 21st century learning paradigm that places emphasis on students' ability to find out from various sources, collaborate in solving problems and be able to think analytically. (R&D Ministry of Education and Culture, 2013).

Changes in the world of education need to be made because every era experiences changes. This change is in line with the acceleration of technology and information. Changes need to be made along with developments in information technology (Diknas, 2020). From the effects of the changes that have occurred, in the world of education there have been various changes, both in terms of methods and content used as teaching materials. According to Wagner (2010), students must master survival skills and abilities which are emphasized on seven skills, namely the ability to think critically and solve problems, collaboration and leadership, agility, have an entrepreneurial spirit, have initiative, be able to adapt, analyze information, imagine and be able to communicate well.

From some of the expert opinions above, it seems that the learning orientation in the world of education must change, from initially only being in the classroom theoretically, now the world of education is being challenged for various project and problem-based learning because only in this way can students' criticality and creativity be increased. The results of research on project-based learning and problem-based learning show that this learning provides advantages for students to learn factually compared to more traditional classroom learning. Meanwhile, Trilling and Fadel (2009) said that by studying this model method for quite a long time, they showed significant learning results that were different from the results of traditional methods.

b) Opportunities for Educational Transformation in the Digital Era

Digitalization of education has great potential to improve the effectiveness of learning and the quality of education. Some of the positive effects of digitalization of education are as follows:

- Ease of access and flexibility of learning

The transformation of education to be technology-based allows students to learn anywhere and at any time. This gives students the flexibility to study at

their most convenient time and place. Apart from that, digital education also makes it easier for students in remote areas to access quality education.

- Learning is more interactive and interesting

The era of digital education can make the learning process more interactive and interesting through the use of video, animation, Augmented Reality (AR), images and gamification which can increase student motivation and interest.

- Enables collaboration and connection-based learning

Technology allows students to collaborate and connect with other students around the world so that they gain many new insights.

- Cost and time efficiency

Online learning can reduce transportation costs and save time so you can do many other jobs. Apart from that, this technology also makes it easier to manage and assess learning by teachers and educational staff.

c) Challenges of Educational Transformation in the Digital Era

On the other hand, the transformation towards digitalization of education also brings various challenges in Indonesia. Strict planning and monitoring is required to meet these challenges. The following are the challenges of digitalization of education that need to be faced.

- Infrastructure and access to support the digitalization process is not evenly distributed, especially in remote areas.
- It is difficult to adapt to such rapid changes. The process of transitioning education to technology-based happened so quickly, that many people felt shocked because they were not used to using technology.
- Lack of availability of digital content. This clearly happened because the government had not prepared the learning content thoroughly but it had to be published immediately during the pandemic. As a result, the available content is incomplete and of poor quality.
- Lack of digital skills training, both from teachers, students and parents. This is a big challenge in transforming education into the digital era
- The lack of teaching staff who are skilled in using technology can hinder the learning process.
- There is a distortion of information due to increasingly easier access to information without limits. This distortion of information can disrupt the learning process and damage the image of education.

d) Education Transformation Support Program

As explained above, there are various opportunities and challenges in facing educational transformation in the digital era. Therefore, the government as the highest authority in education has formulated several strategies to face this digital era.

Reporting from the Ministry of Education and Culture's National Education Department 2020, the government has formulated a strategy to improve the quality and digital transformation of Indonesian education, such as maximizing digital infrastructure, having a global vision of Indonesian education, and

preparing a national digital learning system. The forerunner to the formation of these programs began with the Covid-19 pandemic.

In implementing the education digitalization program to adapt to current conditions. In supporting the transformation of education towards the digital era, the government is implementing various programs as follows.

1. Distance Learning (PJJ)

PJJ is a distance learning process through the use of communication media. The PJJ policy was implemented in formal education during the COVID-19 pandemic to minimize face-to-face meetings. PJJ is the first step in the transformation of education into a digital form.

2. Independent Learning Program

The Independent Learning Program is a program launched by the Indonesian Ministry of Education, Culture, Research and Technology in 2020 to accelerate the transformation of national education by utilizing digital technology. This program includes increasing teacher competency, developing an adaptive curriculum, and using information and communication technology in learning. This program consists of four main pillars, namely:

- Student-focused learning: this program aims to increase student involvement in learning, one of which is by giving them the opportunity to choose learning methods that suit their needs.
- Teachers as learning facilitators: provide training and guidance to teachers in using technology and effective learning methods to support the first pillar.
- Schools as a base for learning: encouraging schools to innovate in providing educational services.
- Responsive education system: reforming policies and regulations that support the implementation of the Independent Learning program.

The Independent Learning program is expected to produce students who have skills relevant to the demands of the world of work, able to adapt to technological changes, increase competitiveness, and improve the quality of Indonesian education at the global level.

3. Indonesia Connected

The Connected Indonesia Program is an Indonesian government program launched in 2019 with the aim of increasing digital connectivity throughout Indonesia and increasing internet access in remote areas. The government also provides training and education related to the use of digital technology to the public to increase digital literacy.

4. Palapa Ring

The Palapa Ring program aims to improve internet connectivity throughout Indonesia through the development of integrated telecommunications infrastructure. This program was announced in 2014.

5. Digital Literacy Movement Program (GLiD)

The GLiD program aims to increase digital literacy among students, teachers and the general public. This program includes digital literacy training, development of digital teaching materials, and dissemination of information regarding internet safety and ethics.

e) Use of Google Classroom as Education Transformation in the Digital Era

Google Classroom is an online blended learning application platform that can be used for free. Educators can create their own classes and share the class code or invite students. Google Classroom is intended to help all areas of education by helping students find or overcome learning difficulties, share lessons and create assignments without having to attend class.

There are several functions and advantages that can be obtained from Google Classroom in its use as a learning management system (LMS), namely:

1) The class setting process is fast and comfortable . The process of creating classes on Google Classroom is very fast and comfortable compared to having to install a local LMS or register with an LMS provider.

2) Time saving and efficiency . Class participants or students no longer have to download assignments given by the teacher. Teachers create and distribute documents for their students online and can also determine ratings, provide feedback on all assignments and carry out assessments using the Google Classroom application. Thus, there is potential for saving time on both sides, both students and teachers.

3) Able to increase cooperation and communication . One of the most important benefits of using Google Classroom is efficient online collaboration. Teachers can send notifications to their participants or students to start online discussions or notify them about certain online learning activities. On the other hand, students have the opportunity to provide feedback to their peers by uploading posts directly into discussions in Google Classroom.

4) Centralized data storage, only in one place, namely Google Classroom, all learning is in one centralized location. Students can see all their assignments in a specific folder, teachers can save materials eLearning and activities for the school year in the cloud and all rankings or grades can be viewed in the application.

5) Efficient, practical and fast resource sharing, Facilitators or online teachers and trainers have the ability to share information and online resources with their participants directly. Rather than having to update eLearning courses or send individual emails to each student, simply by accessing the Google Classroom app, teachers can distribute links to online resources and additional eLearning materials that can benefit their students.

Google Classroom has many conveniences such as Google Drive, Google Docs, Sheets and Slides, and Gmail which will help educational institutions to teach more easily without physical materials such as classes, whiteboards and stationery. Here are some features that really support online learning:

1) Assignments: Each downloaded assignment will be saved and assessed on Google's suite of productivity applications which enable online collaboration. Rather than simply sharing documents that reside on a student's Google Drive with the teacher, the files are hosted on the student's drive and then sent for grading.

2) Assessment (grading), Google Classroom supports many different assessment methods. Teachers have the option to monitor each student's progress on assignments where they can make comments and edits. Changed assignments can be graded by the teacher and returned with comments to allow students to revise the assignment and return it. Once graded, an assignment can only be edited by the teacher unless the teacher returns the assignment.

3) Seamless communication, Announcements can be posted by teachers to the class stream which can be commented on by students allowing two-way communication between teachers and students. Students can also post to class but will not be as high priority as announcements by teachers and may be moderated.

4) Originality reports, originality reports were introduced in January 2020 that allow educators and students to view passages and passages of submitted work that contain words that are exactly or similar to those from other sources. For students, it highlights source material and missing quotation marks to assist students in improving their writing. Teachers can also see originality report, allowing them to verify the academic integrity of the submitted student work.

5) Learning archive, Classroom allows instructors to archive courses at the end of the semester or year. When a course is archived, it is removed from the homepage and placed in the Archived Classes area to help teachers organize their current classes. When a course is archived, teachers and students can view it, but will not be able to change it until it is restored.

6) Mobile app, Google Classroom mobile app, introduced in January 2015, available for iOS and Android devices. The app lets users take photos and attach them to their tasks, share files from other apps, and supports offline access.

7) Personal security, in contrast to google consumer services, google classroom, as part of g-suite for education, does not display any advertising in the interface for students, lecturers and teachers, and user data is not scanned or used for advertising purposes.

CONCLUSIONS

The digital era is also known as an era that continues to develop rapidly, as stated by Hajri (2023) that the digital era continues to develop rapidly, education faces significant challenges as well as tempting opportunities starting in the 21st century. Digital technology has completely changed the educational landscape, changing the way we learn, access information and interact with the world around us. In this context, it is important to understand the role of digital technology in educational transformation and the challenges and opportunities in this educational transformation.

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