

Educational Transformation in The Digital Era

Dwi Yanuarini¹, Masykur²

¹SMA Negeri 1 Payaraman, Ogan Ilir, South Sumatra, Indonesia, ²Peneliti
Independen Kota Bengkulu, Bengkulu, Indonesia

Corresponding author e-mail: yanuarinidwi@gmail.com

Article History: Received on 15 October 2023, Revised on 28 January 2024,
Published on 19 February 2024

Abstract: This research uses a literature study approach which aims to determine the quality of learning at SMA Negeri 1 Payaraman through the transformation of education in the Era of digital development. The method used in this study is a literature review of several previous studies using data collection techniques, reading and recording and processing research materials then a review is carried out. The review process carried out at SMA Negeri 1 Payaraman has improved the quality of learning through educational transformation including increased learning, increased knowledge, no distance, easier evaluation of learning outcomes, increased learning outcomes, the realization of a collaborative learning atmosphere, and made it easier for teachers and homeroom teachers to manage grades and write report cards. However, behind the advantages, there are disadvantages of the transformation of digital era education, including technology making students less productive and lazy, high cheating rates, less focus and decreased interest in learning, and decreased writing skills.

Keywords: Digital Era, Educational Transformation, Technology Development

A. Introduction

The development of the times is marked by the progress of the digital era felt by the community, as we know today children to parents are inseparable from electronic media, namely cellular phones or smartphones that function as communication media and information dissemination media besides that digital progress is marked by advances from computerized data, smartphones, internet, artificial intelligence, biotechnology, robotization, and so on (Nursyifa, 2019).

The development of digital technology continues to take place rapidly so that the digital era is born that replaces the conventional Era. The advancement of the digital era also has an impact on the world of education which is taking place quickly, both on infrastructure aspects, as well as content in the form of methods, models, strategies and approaches besides that there is a shift in the work system from conventional to digital (Ngongo *et al.*, 2019). Related works from previous researchers should be presented. A minimum of 10-15 good and recent works should

be presented. This section can also be combined with the introduction section. Here the author can discuss research gaps that this study will or wants to address. Provide text citations in APA style (Haris, 2019).

The shift in infrastructure and methods in education is strongly felt in its changes even in the development of education in the future education will no longer learn in the classroom (Ngongo *et al.*, 2019). This is also in line with Azis (2019) that education in the digital era requires teachers to understand and get used to using information and communication technology into the learning process because the learning process is expected to use more digital media besides that learning is no longer teacher-centered but student centered.

Every change will certainly have an impact in the world of education so that it can be used as a challenge that must be faced (Fajar & Hartanto, 2019). Education stakeholders in order to quickly adapt to these changes with digital literacy, namely by mastering the ability to obtain, understand, and be able to implement information from various sources in digital form. With the existence of educator human resources and education personnel who are able to adapt to the development of digital and communication technology so as to produce skilled, creative, innovative and professional educators, it is not impossible to give birth to quality education.

Digital era transformation that can be used in education for organizational change influenced by digital technology (Widnyani *et al.*, 2021). The transformation of education is marked by a change in the old paradigm to a new paradigm. The old paradigm change in education is conventional where learning is teacher-centered while in the modern era education is centered on students and education is influenced by the development of science and technology, the paradigm in the digital era has a broad impact. This change provides a way of viewing, a way of thinking, a way of speaking, and a way of acting in education. This is in line with the objectives of Indonesian Education in Law of the Republic of Indonesia N0. 20 of 2003 regarding the National Education System, namely National Education serves to educate the lives of bangsa aims to develop human resources who believe and fear God. Almighty, have noble character, knowledge, healthy, capable, creative, independent, and become democratic and responsible citizens.

In today's era, society must undergo digital transformation. This digital transformation is the beginning of the creation of new ways that are more effective and efficient to replace the old process of doing things. This activity is carried out by utilizing existing technology. Over the past few decades, the world of education has developed very rapidly due to the technological advancements brought about by digital transformation. E-learning or online learning is one of the characteristics of digital transformation in today's educational world. The development of digital transformation was felt during the Covid-19 pandemic in the world of Education where the learning process was carried out through distance using technology. At

that time all systems and methods switched to online and all-digital methods that were previously with a conventional system that required all education stakeholders to learn technology and begin to transform. Developments in the world of education, especially in the field of technology and dynamic communication, make us flow can respond well. This also has an impact on the learning process at SMA Negeri 1 Payaraman which requires stakeholders to adapt to these changes.

The digital learning process requires the readiness of learners and teachers to communicate interactively using information and communication technology such as internet connected laptops, smartphones etc. Challenges in the transformation of education in the digital era must be faced, so researchers are interested in conducting a literature review entitled "Education Transformation in the Digital Era".

B. Methods

The method used in this study is with a literature approach. In literature research, researchers use the following data collection techniques, read and record and process research materials. Then in collecting data, researchers review and explore several journals, books and documents (both printed and electronic) as well as other sources of data or information that are considered relevant to research or studies (Zaoui & Souissi, 2020).

C. Results and Discussion

Transformation Concept

Transformation is something that refers to the reality of the change process (Widnyani *et al.*, 2021). Transformation as a change in form, appearance, nature and so on (Handayani, 2011). Transformation is a process of change that has the characteristics of (1) The existence of differences is the most important aspect in the transformation process, (2) The existence of the concept of characteristics or identity that is a reference for differences in a transformation process. (3) Historically, the transformation process always describes different conditions (Dewi in Widnyani *et al.*, 2021). Meanwhile, according to scientists, Laseau in Widnyani *et al* (2021) said that transformation is a process of gradual change so that it reaches the ultimate stage, changes made by responding to the influence of external and internal elements that will direct changes from previously known forms through the process of repeatedly doubling or multiplying.

Transformation is (1) Transformation is Typological (geometrical) geometric shapes that change with the same components and functions of space; (2) Transformation is grammatical ornamental (ornamental) carried out by shifting, rotating, reflecting, overturning, folding and others; (3) Transformation is refersal (opposite) image reversal on the figure of the object to be transformed where the image of the object is

changed to the opposite image; (4) Transformation is distortion (confuse) the designer's freedom in activities (Laseau in Widnyani et al., 2021).

Educational Transportation

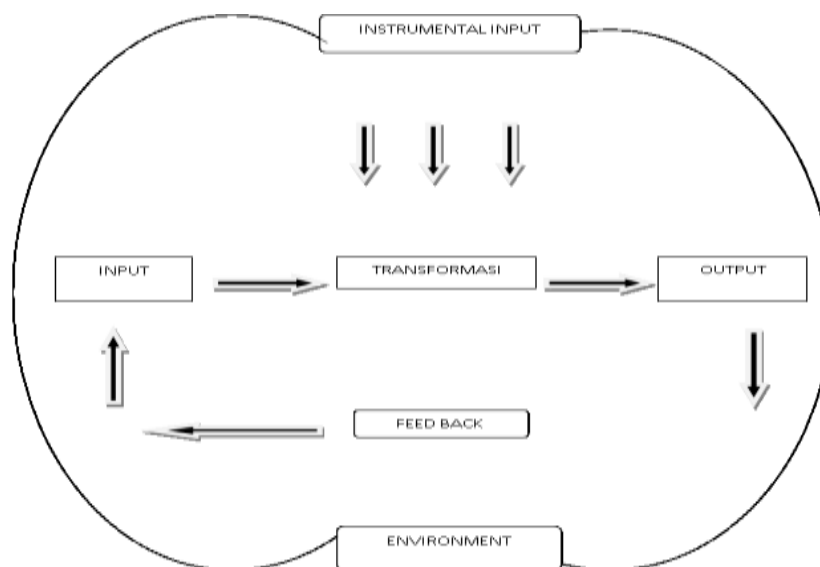


Figure 1. Chart of the Educational Transformation System

Information:

(1). *Instrumental input* is the centre of *input*, (2). Input i.e. students and curriculum, (3). Transformation is the process of teaching, educator or instructor, (4). Output is the result of educational products that can be absorbed by PTN and utilized optimally for the development/progress of society, (5). Environment is the environment that exists around where the educational process takes place, meaning it is input into the community. What role does education play in society? Are there any benefits of an educational transformation system in society?, and (6). Feedback is feedback, a command from the brain that will work by itself (Susanti, 2013). Education transformation is an interesting and fun teaching change, therefore the role of teachers is very important to make many changes ranging from changing mindsets, learning media, teaching methods, updating information, mastering technology, mastering literacy, and so on (Nursyifa, 2019).

The definition of education according to Ki Hajar Dewantara is as a whole human learning process by learning and developing life throughout life. Broadly speaking, education is part of social engineering that systematically takes place in a certain period of time so that it does not only mean face-to-face integration between teachers and students in a classroom environment (Mahmud Arif, 2008). Education is the core of the "civilization" process that takes place in the midst of community life, which contains in the process of developing potential, cultural inheritance, and a combination of the two. Education as a way and activity that is full of humanization

process, this has actually made education a process of social transformation towards change towards progress in society. Thus, education is a means of producing consciousness in order to return man to his human nature. In addition, through education as the key to success in facing the Era of globalization.

Education transformation is changes made, a cycle, a process that continues to run and ensures that the changes made are relevant and effective in improving the quality of student outcomes. Education Transformation is recognized as being able to realize a society that understands the importance of mutual agency and good behaviour and is ready to face the challenges of globalization to realize quality human resources, one of which is technological literacy in the digital era.

Digital Era

Education must adapt to digital transformation and must welcome this change enthusiastically. This change is known as the digital era. The digital era is a condition of the era or life where all activities that support life can be facilitated by the existence of sophisticated technology. In addition, the digital era is also present to replace some past technologies so that they can be more modern and also more practical. The digital era is an Era where information is easily and quickly obtained and disseminated using digital technology. In this digital era, almost all dimensions of life are influenced by digital technology, also the world of Education. Digital transformation in education is a necessity. Educational institutions ranging from elementary schools, middle schools to universities cannot be separated from digitalization. One form of digitalization can be seen in the implementation of learning at SMA Negeri 1 Payaraman before the Covid 19 pandemic, only a small number of teachers used digital technology in the learning process, but after the Covid 19 pandemic, all teachers were required and adapted quickly to carry out the learning process with PJJ either using whatsapp, instragram, google meet, zoom or other applications so that the learning process could run efficiently. The positive impact has been felt by teachers at SMA Negeri 1 Payaraman to date so that teachers can utilize digital technology in learning.

Steps to Realize Educational Transformation

Based on the Regulation of the Minister of National Education of the Republic of Indonesia No. 22, 23 and 24 of 2006, schools have been given the authority to develop curricula by involving school committees, communities and related stakeholders. Various efforts to establish cooperation in the form of training, workshops, the formation of teacher communities, joint research and other forms that lead to the exchange of information and innovation are needed to improve teachers ability to understand models, methods and content in curriculum preparation. Mutual respect for the role between school managers and the community around the school, community leaders, education experts and

bureaucracy is expected to accelerate the process of improving the quality of education. The steps in realizing the transformation of education at SMA Negeri 1 Payaraman are: First, in terms of curriculum. The school only needs the curriculum development team to review the existing curriculum. Second, formulate learning objectives. Third, form a learning community in schools as a forum to share good practices in realizing fun learning and lifelong learners (Rinawati, 2015).

Advantages of Educational Transformation in the Digital Era

The advantages of transforming education in the digital era at SMA Negeri 1 Payaraman are: (1) Increased learning. The development of technology owned by schools such as projectors, laptops, speakers, and the internet is a great resource for teachers to help students understand concepts easily and realize fun learning; (2) Increased knowledge. Students can complete their research projects by referring to the vast amount of information available on the internet, which is able to develop good analytical and research skills. With reference to a large number of resources, students can use assessment skills to select the best materials and use them to complete the project. That way, students can develop better research skills; (3) There is no distance. With the introduction of online programs there is almost no need to be physically in the classroom; (4) Evaluation of student learning outcomes is easier. Digitalization brings teachers to a more practical approach to assess and evaluate student performance results. Technology plays an important role in capturing the details of learner's work which helps teachers and parents can monitor the child's development easily; (5) Improve learning outcomes with data analysis. Schools can utilize analytical technology to evaluate the process of student learning activities and improve learning outcomes. By analyzing the data collected through the use of technology to students in the classroom, teachers can have a better understanding of what each child and classroom needs; (6) Create a collaborative learning atmosphere. Digital learning can strengthen learning more collaboratively. Digital learning platforms can make it easier for teachers to create groups and manage groups; (7) Make it easier for teachers and homeroom teachers to manage grades and write report cards. At SMA Negeri 1 Payaraman, filling report is no longer traditional but has been digitized using the application (Bilyalova et al., 2020).

Lack of Educational Transformation in the Digital Era

Perceived shortcomings include: (1) Technology makes students less productive and lazy. They just copy and paste information to complete the task quickly without understanding what they are doing; (2) High fraud rate. Technological developments such as graphing calculators, high-tech watches, mobile phones and similar equipment have become sources for cheating in exams. It is easier for students to write formulas and notes on a graphing calculator; (3) Lack of focus and decreased interest in learning. It is not uncommon for students to be found in the learning process playing cellphones so that it has an impact on reducing interest in

learning so that from the results of the evaluation, SMA Negeri 1 Payaraman made an agreement for all students and guardians not to bring cellphones around the school unless there are certain things, even then they must know the picket teacher, homeroom teacher, subject teacher or BK teacher; (4) Writing skills in students decrease. This causes SMA Negeri 1 Payaraman to create a literacy program where students read books according to their interests and rewrite literacy books at the end of the semester the literacy team selects students as literacy ambassadors based on the writing in the literacy book, besides that in the classroom there is also a reading corner there is also a book ku and mading class so that it can foster a culture of reading and writing like these students (Vagewati et al., 2023).

The Threat of Education Transformation in the Digital Era

Technological advances should make education easier. But the opposite tends to happen. The rush of information does not always have a positive effect. A very worrying impact is the increasingly open association and communication with the outside world. There are no more delimiters and filters. Everything has come together and this has a huge impact on students, which will erode students' mentality and morale. So that there is the potential for moral decadence in the generation order of the Indonesian nation (Wijayanti et al., 2022).

The threat felt at this time students spend a lot of time in front of cellphones without realizing that there are obligations and responsibilities as a student. Learners prefer online games or games over learning applications. The development of online games is very disruptive to student learning activities and even excessive use of time such as using gadgets until late at night so that homework is not done so that it has an impact on learning in the classroom the next day makes these students sleepy so the learning they do is not absorbed optimally (Nugraha et al., 2022). Apart from that, the threat that occurs can be in the form of misuse of internet media in the form of content that is not good for students to watch. This can interfere with concentration in learning, can have a bad moral impact, deviant behavior and unnatural actions carried out as students (Darmawan et al., 2019). To overcome the growing threats among students so that schools need to take preventive measures, socialization, cultivate good habits such as familiarizing digital literacy well, teachers are responsible for realizing learning that is pro-student and making a pleasant learning atmosphere by utilizing digital media in learning, and at SMA Negeri 1 Payaraman school has implemented religious activities such as rohis activities, Friday Taqwa, reading Yasin together, praying before and after studying, and Friday prayer together.

Barriers of Educational Transformation in the Digital Era

Obstacles that occur at SMA Negeri 1 Payaraman antara others:

1. Physically in the form of facilities and infrastructure. Facilities and infrastructure even though they already exist but the number is still very minimal such as the number of textbooks is not proportional to the number of students, projectors are not proportional to the number of classes, laboratory equipment is still very minimal, the ratio of toilets to students is appropriate and the provision of healthy canteens. The way to overcome the limitations of books with a ratio of 1 book to 4 students can be done by making digital modules, using ppt so that students can read brief reviews even though they do not have books, projector limitations can be done by utilizing students' cellphones but based on cellphone evaluations it is prohibited to be brought around the school unless there is something urgent so that it can be done so far trying to come early to Getting a projector, and ways to overcome the limitations of existing tools and materials in the laboratory so that some teachers take advantage of simple tools and materials that exist in the daily environment and there are some also see practicum videos taken on projectors it is hoped that students can experience directly so that the learning process is expected to be meaningful.
2. The location of the school far from residential areas results in frequent power outages and the internet is difficult to access. But that does not make it an obstacle for teachers at SMA Negeri 1 Payaraman in realizing learning that is pro-student. There are still some teachers who are still in the safe zone who do not synergize to move and change according to their times.

D. Conclusion

Based on the description above, it can be concluded that there is an improvement in the quality of learning at SMAN 1 Payaraman through educational transformation including increasing learning, increasing knowledge, no distance, evaluating learning outcomes more easily, increasing learning outcomes, realizing a collaborative learning atmosphere, and making it easier for teachers and homeroom teachers to manage grades and write report cards. However, behind the advantages, there are disadvantages of the transformation of digital era education, including technology making students less productive and lazy, high cheating rates, less focus and decreased interest in learning, and decreased writing skills.

E. Acknowledgement

Thank you to the school and the parties who assisted in the implementation of this writing.

References

Azis. (2019). Learning Strategy in Digital Era. *Annual Conference on Islamic Education and Social Sains (ACIEDSS)*, 1(2), 308–318.

- Bilyalova, A. A., Salimova, D. A., & Zelenina, T. I. (2020). Digital Transformation in Education. *Integrated Science in Digital era: ICIS 2019* (pp. 265-276). Springer International Publishing.
- Darmawan, A., Lestari, M., & Wibawati, Y. (2019). Socialization of Healthy Internet Use for Karang Taruna Youth. *Jurnal PKM Pengabdian Kepada Masyarakat*, 2 (02), 71-81.
- Fajar, C., & Hartanto, B. (2019). Challenges of Vocational Education in the Industrial Revolution Era 4. 0 in Preparing Superior Human Resources. *Seminar Nasional Pascasarjana 2019*, 163-171.
- Handayani, B. L. (2011). Transformation of Religious Behavior (Analysis of Efforts to Purify Faith Through Ruqyah Syar'iyah in the Jember Muslim Community). *Sosiologi Islam*, 1(2), 71-86.
- Mahmud Arif. (2008). *Transformative Islamic Education*. Tiara Wacana.
- Ngongo, V. L., Hidayat, T., & Wijayanto. (2019). Education in the Digital era. *Prosiding Seminar Nasional Pendidikan Program Pasca Sarjana Universitas PGRI Palembang*, 2, 628-638. <https://jurnal.univpgri-palembang.ac.id/index.php/Prosidingpps/article/view/3093>
- Nugraha, Y., Rahayu, D., Budiman, T., & Febriana, D. H. (2022). Utilization of Digital Transformation and Social Media as a Means of Communication to the People of Cibodas Village, Cikajang District. *Cakrawala: Jurnal Pengabdian Masyarakat Global*, 1(3), 23-33.
- Nursyifa, A. (2019). Transforming Social Science Education in Facing the Industrial Revolution 4.0 Era. *Jurnal Pendidikan Kewarganegaraan*, 6(1), 51-64. <https://doi.org/10.32493/jpkn.v6i1.y2019.p51-64>
- Rinawati, A. (2015). Transforming Education to Face Globalization. *Ekuitas: Jurnal Pendidikan Ekonomi*, 3(1).
- Susanti, R. (2013). Educational Technology and It's Role in Education Transformation. *Jurnal Teknologi Pendidikan*, 2(2), 15-23. <https://doi.org/10.32832/tek.pend.v2i2.448>
- Vagewati, U. J., Alifa, Y. D. N., Millah, Z., & Nissa, Z. K. (2023). Implementation of E-Learning Learning as Education Transformation in the Digital era. *Social Science Academic*, 1(2), 221-228.
- Widnyani, N. M., Astitiani, N. L. P. S., & Putri, B. C. L. (2021). Application of Transformation Digital for UKM During the Covid-19 Pandemic in Denpasar City. *Jurnal Ilmiah Manajemen dan Bisnis*, 6(1), 79-87. <https://doi.org/10.38043/jimb.v6i1.3093>
- Wijayanti, T., Hidayatullah, H., & Prasetya, B. (2022). Study Analysis of the Effectiveness of Transformational Leadership in Improving Teacher Professionalism. *Jurnal Penelitian IPTEKS*, 7(2), 81-88.
- Zaoui, F., & Souissi, N. (2020). Roadmap for Digital Transformation: a Literature Review. *Procedia Computer Science*, 175, 621-628. <https://doi.org/10.1016/j.procs.2020.07.090>