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Digital Transformation in Educational Human Resource Development in Inclusion Schools

^{1*}Anggi Nauli Simatupang, ²Usman Radiana, ³Luhur Wicaksono

^{1 2 3}Tanjungpura University, Pontianak

¹f2171231003@student.untan.ac.id; ²usman.radiana@fkip.untan.ac.id;

³luhur.wicaksono@fkip.untan.ac.id

ABSTRACT

Background

Digital transformation in inclusive schools is a strategic step To upgrade the quality of educational human resources. By utilizing technology effectively, schools can create learning environments that are more inclusive and adaptive to the needs of all students.

Purpose

This study aims to explore how digital transformation impacts the development of human resources (HR) in inclusive schools.

Design/method/approach

Utilizing a qualitative approach through literature review, this research synthesizes data from recent journals, books, and articles published between 2014 and 2024.

Results

The findings reveal that digital transformation significantly enhances HR development by providing interactive and adaptive training methods such as e-learning platforms and simulation tools, which are crucial for improving the skills of educators in inclusive settings. Additionally, digital tools facilitate flexible learning and better communication between teachers, students, and parents, thus supporting a more inclusive educational environment. However, challenges such as limited technological infrastructure, insufficient training, and regional disparities need to be addressed to fully realize the benefits of digital transformation.

Contribution/value

The study highlights that while digital transformation offers substantial improvements in teaching and HR development, ongoing support and resource allocation are essential for overcoming existing obstacles and maximizing its positive impact on inclusive education.

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INTRODUCTION

Some parents with children with special needs often choose to send their children to special schools or special schools (SLB). This is because teaching methods in SLB are specifically designed and adapted To address the requirements of children with special conditions.

Children with physical, psychological limitations or differences in brain abilities actually have significant potential, although the way to develop this potential may require a different approach. Inclusive schools can be an alternative for parents to hone the potential of children with unique needs.

A part of the most important aspects of an inclusive school is celebrating and respecting the diversity and uniqueness of each child. Inclusive schools that have qualified human resources strive To build a climate that facilitates individual differences, by providing Possibilities for all children to evolve according to their individual needs and abilities. In this way, schools not only recognize but also celebrate differences as strengths that enrich the learning experience for all students.

Aranditio, S., et al., said that in Indonesia, there are 4,695 special assistant teachers to accompany 135,874 students with disabilities, which is still far from enough. Based on Basic Education Data as of May 2023, apart from the number of special assistant teachers, there are also 10,244 regular teachers who have been trained to support people with disabilities. At the primary and secondary education levels, there are 40,165 inclusive schools serving a total of 135,874 learner with disabilities. Meanwhile, in special schools, there are 2,326 schools serving 152,756 students. (Aranditio, et al., 2023, kompas.id)

Inclusion school administrators, especially their human resources, known as educators (Special Education Teachers), face challenges; These challenges can come from inside or outside the school. These include: 1) Teachers' feelings of lack of competence: this is due to teacher rejection and weak support for children with special needs; did not receive supplies; 2) limited facilities and infrastructure: no classes for special guidance, hearing aids, etc.; 3) Low awareness of parents and society towards children with special needs: in reality there are still many parents who are reluctant to send children with special needs to school because they are worried about rejection or discrimination. The community is less concerned about the existence of children with unique needs and inclusive schools; 4) The need for collaboration: teachers do not want to spend time collaborating in developing inclusion programs, mismatch between class teachers and accompanying teachers; 5) Administrative burden and curriculum modification: administrative demands managed by educators, service reports, data collection and others.

Maisarah, in Fransiska Angelina, et al (2023), explains in her research that society still views children with special needs as people Individuals with physical or mental disabilities who experience challenges and often rely on assistance and understanding from others. Because there is a societal view that having a child with special needs is a disgrace.

Educational human resources are faced with digital transformation or another term, namely the Industrial Era 4.0. Era 4.0 is a period of major change that affects almost all aspects of industry and human life through the use of digital technology and the internet. Industrial Revolution 4.0 combines wireless technology and big data to increase data efficiency through server systems, as well as uniting all automation activities in one integrated system. The coronavirus pandemic has also accelerated the application relating to information system technology in various fields, encompassing the advancement of educational human resources in Indonesia.

Educators are expected to master technology and adapt to changes in the way of learning that has shifted from offline to online. One of the goals of Indonesia 2045 is to create a country

that is sovereign, independent and characterized, which can be accomplished by enhancing human resources. and mastery of science and technology. The Regional Secretary (Sekda) of the Kuningan Regency Government, West Java, Dian Rahmat Yanuar, stated that the application of digital technology in the education sector will increase teachers' confidence in the teaching process and encourage their development.

Today, the digital world not only influences lifestyles, but can also change them profoundly, and these changes cannot be avoided by anyone. Therefore, more and more educational programs are being developed utilizing digital resources, both through social media and educational platforms, that are readily available to teachers and learners..

The Education Technology Transformation Program developed by the Department of Education and Culture is a clear example of the need for digitalization in the future. This program not only makes the learning process easier but also aims to enhance the educational standards in Indonesia. To support this goal, the Ministry of Education and Culture has launched various educational platforms, such as the Merdeka Mengajar Platform. This platform is designed to assist teachers, school principals and education agencies in implementing the Independent Curriculum, as well as providing a space for teachers to share learning content and good practices that have been implemented.

Ritonga, A.E., (2023:37) explains that digital transformation is a new capability that is applied thoroughly and comprehensively, which allows for changes in aspects of culture, organization, relationships or administrative models. This process aims to produce optimal results and provide a database that can be stored in the long term, both in the business and public government sectors, with the main aim of making people's lives easier.

Digital transformation in inclusive schools is a strategic step To upgrade the quality of educational human resources. By utilizing technology effectively, schools can create learning environments that are more inclusive and adaptive to the needs of all students. However, to achieve success, support is needed from the entire education ecosystem, including the government, schools and society. Efforts to overcome existing challenges, such as access gaps and teacher training needs, must be a priority in implementing this digital transformation. So the author took the title "Digital Transformation in the Development of Educational Human Resources in Inclusive Schools."

From the background above, questions arise that need to be developed, namely: 1) How is digital transformation in inclusive schools? 2) How is educational human resources developed in inclusive schools? 3) How can digital transformation develop educational human resources in inclusive schools?

This writing aims to describe in depth three important aspects in the context of inclusive education. First, we will discuss digital transformation in inclusive schools, which includes the application of digital technology to assist in teaching and learning and overcome the challenges faced by inclusive schools in technology integration. Second, this article will examine the growth of human resources in education (HR), with a focus on strategies and best practices in improving the skills and Proficiencies of educators and education personnel. Third, this article will explore digital transformation he enhancement of educational human resource in inclusive schools, namely how the application of technology can support the professional development of teaching and administrative staff in inclusive school environments, as well as its impact on educational effectiveness and inclusiveness. Thus, this article aims to provide comprehensive insight into the role of technology in boosting the quality of education in inclusive schools and developing the capacity of the human resources involved.

METHOD

This research employs a qualitative approach utilizing a literature review method. Data sources were gathered from journals, books and articles related to digital transformation in inclusive education published between 2014 and 2024.

Selection Criteria: Establish literature selection criteria, such as: Relevance: Literature that is relevant to the research topic. Credibility: Sources published by reputable publishers or experienced academics. Publication Date: Prioritizes the latest literature to ensure the relevance and accuracy of the information. Methodological Quality: Studies with clear and valid methodology.

Search Procedure: Develop literature search steps, including: Develop relevant keywords (for example, "digital transformation of inclusive schools," "development of educational human resources," "development in inclusive education"). Perform a search in the selected database. Use search filters to narrow results (e.g., year of publication, type of publication).

Literature Analysis: Categorization: Grouping literature based on main themes or topics, such as: Digital transformation in inclusive schools; Educational human resource development strategy; Technology integration in HR development.

Evaluation: Assess the quality and contribution of the literature by considering: Research methodology; Validity and reliability of results; Suitability to research questions. Synthesis: Combining findings from various literatures to form a comprehensive understanding. Analyze patterns, relationships, and differences in found study results. Identify any research gaps that may exist.

RESULTS

Outcome 1: Digital Transformation

Westerman et al., (2011), asserted that digital transformation involves the application of technology to enhance company performance and expand reach by fundamentally altering customer relationships, internal processes, and value propositions (Octaviani, E. 2023:17).

Table 1. Definition of Digital Transformation

Writer	Definition
Liu, Chen, And Chou (2011), p.1728)	Digital Transformation refers to an organizational change that incorporates digital technology and business processes within the digital economy.
Matt dkk. (2015), hall. 339	Digital transformation strategies adopt various perspectives and objectives. Originating from a business-focused viewpoint, this approach emphasizes the transformation of products, processes, and organizational elements driven by new technological advancements.
Dr. Parviainen (2017), reg. 64	Digital transformation is described as a shift in work methods, roles, and business offerings resulting from the integration of digital technology within an organization or its operational environment.
Hess dkk. (2016)	Digitalization, or digital transformation, refers to the changes enabled by digital technology that enhance a company's business model, products, processes, and organizational structure.

Bondar, Hsu, Pfouga, and Stjepandi'c (2017), p. 33	Digital transformation is a continuous, strategic renewal process that utilizes advancements in digital technology to develop capabilities that revitalize or replace business models, collaborative methods, and organizational culture.
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Sumber : Putri, O.A., 2023: 46. IAIN Kediri

Digital transformation basically refers to changes that utilize technology to simplify various activities. According to Hadiono and Santi (2020), digital transformation is the use of technology, including virtualization, mobile computing, and system integration, to simplify processes and activities. (Mariana, V.D., Hidayati, D., 2022:79).

The transformation of education in the digital era has caused major changes in the contribution of educators to the learning experience. In the past, teachers served as the primary source of information, but with the advent of digital technology, this role has undergone significant changes. (Rachmi, et al., 2024:54)

Result 2: Development of Educational Human Resources

Ningrum, E., (2023:3), said that development is an effort to improve something so that it gets better. Human resource Advancement can occur through educational programs and training. Education is more Theory-based learning is long-term, while training is practical and typically shorter in duration.

Human resources (HR) are required to actualize their abilities, both in terms of thinking and physically in an integrated manner. However, these two aspects are not enough without emotional intelligence. In the context of the world of work as a community, emotional intelligence is very important for recognizing and understanding oneself and interacting with colleagues.

Human resource (HR) development must focus focusing on the principles of elevating quality and work performance. Several objectives of human resource development include: Enhancing competence from both conceptual and technical viewpoints, (1) Boosting work productivity, (2) Improving efficiency and effectiveness, (3) Elevating professional status and career opportunities, (4) Enhancing services for clients, (5) Strengthening morals and ethics, (6) Promoting welfare.

There are five important domains in developing educational employees, including: Professionalism (the degree of quality or skill demonstrated by personnel in performing their profession), competitive power (having the ability to participate in competition), functional competence (the ability of individuals to carry out their profession), participative excellence (High-quality human resources with greater skills than their peers), and cooperation (teamwork, Personnel who possess the ability to collaborate must be balanced equipped to advance collaborative networks).

Outcome 3: Inclusive Schools

Inclusive education, introduced by UNESCO, comes from the term Education for All, which means inclusive education for everyone. This concept includes an educational strategy that seeks to reach every individual without exception, providing equal rights and opportunities to obtain maximum benefits from education.

The objectives of inclusive schools are as follows: (1) Ensure maximum access for all children, including those with special needs, to receive appropriate education; (2) Support the acceleration of the compulsory basic education program; (3) Enhance the quality of basic education while decreasing absenteeism and dropout rates; (4) Fulfill the mandate of the 1945 Constitution,

particularly Article 31, paragraph 1, which asserts that every citizen has the right to education, and paragraph 2, which mandates that every citizen must attend basic education, with the government responsible for funding it. Additionally, in accordance with Law no. 20/2003 regarding the National Education System, Article 5, paragraph 1 states that every citizen is entitled to quality education, and Law no. 23/2002 concerning Child Protection, especially Article 51, stipulates that children with physical and/or mental disabilities must be provided equal opportunities and access to both general and special education, aimed at reducing absenteeism and dropout rates.



Figure 1. Inclusive School Facilities and Infrastructure

Source: Ministry of Education and Culture's Inclusive Education Guide, 2022:33.

DISCUSSION

The Discussion 1: Digital Transformation in Inclusive Schools

Digital transformation offers various solutions to the challenges faced by inclusive schools. Some relevant implementations include: 1) Digital Learning Aids: Technology such as learning apps, adaptive software, and other learning aids can be adapted to meet the needs of pupils with disabilities, allowing them to learn in the ways that are most effective for them. 2) Online Learning Platform: Web-based learning management systems enable teachers to provide educational materials that can be accessed flexibly by students with various needs. This also makes it easier to differentiate instruction and assessment. 3) Communication and Collaboration: Communication technologies such as video conferencing and online forums facilitate interaction between teachers, students, and parents. This is important in supporting parent involvement and the development of strong relationships in an inclusive school environment.

Discussion 2: Enhancement of educational workforce in Inclusive Schools

Enhancement of educational workforce in inclusive schools can be done through several practical steps: 1) Simulation Based Training and E-Learning: Conduct training that uses computer-based simulations and e-learning platforms to provide practical experience in using educational technology and inclusive strategies. 2) Digital Workshops and Seminars: Organize online workshops and seminars to share the latest best practices, techniques and tools in inclusive education, so teachers can keep their knowledge and skills up to date. 3) Online Professional Community: Establish an online professional community where teachers can discuss, share experiences, and gain support in facing the challenges of inclusive education.

Discussion 3: Digital Transformation in Educational Human Resource Development

Digital transformation plays an important role in the development of educational human resources (HR), especially in inclusive school environments. By leveraging technology to improve the skills and capabilities of teaching staff, digital transformation offers new ways to support and enrich the learning experience.

Digital transformation facilitates more interactive and adaptive training through e-learning platforms and computer-based simulations. Technology also helps teachers improve the technical and strategic skills needed for inclusive education, such as the use of digital tools and teaching techniques that suit students' needs.

The positive impact is that HR training enables teachers to update their skills effectively, increase their ability to adapt to student needs, and gain access to relevant knowledge and resources. This contributes to improving the quality of teaching in inclusive schools.

Discussion 4: Challenges

Digital transformation in the development of educational human resources in inclusive schools faces several challenges, such as limited technological infrastructure, lack of training for teaching staff, and differences in access in various regions. For example, in eastern Indonesia, not all inclusive schools have the same access to the technology and infrastructure needed. For this reason, ongoing commitment and support from educational institutions is needed.

CONCLUSION

Digital transformation in the advancement of educational human resources in inclusive schools offers great potential to boost the effectiveness of teaching and support the needs of students with disabilities. By utilizing technology such as e-learning platforms, digital learning tools, and online communication systems, inclusive schools can create a more adaptive and inclusive learning environment. However, to achieve optimal results, it is important to address challenges related to infrastructure and training, and ensure continued support from the entire education ecosystem. Digital transformation is not just about modernizing teaching methods, but also about empowering educators with the skills and resources necessary to facilitate maximum development of students with a variety of needs.

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