

THE TRANSFORMATION OF MADRASAH THROUGH THE USE OF EDUCATION TECHNOLOGY

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Abstract

This study examines the implementation of educational technology in the process of transformation of the madrasah. The aim is to understand the impact of the use of technology in madrasah education, as well as to give recommendations to improve the effectiveness of its implementation. The research focuses on how technology can be used to enrich learning processes, improve administrative efficiency, and support distance learning. The method used in this research is the method of literature study, i.e. by collecting, analyzing, and concluding various literary sources related to research topics. These data sources include scientific articles, journals, books, research reports, and other relevant online documentation. The results of this study show that the use of technology in madrasah education has a significant impact on improving the quality of learning and wider access to learning resources. However, the research also found challenges in its implementation, including the uneven technological infrastructure and the need for technological training for teachers.

Keywords: Transformation, Madrasah, Technology, Education.

Introduction

The era of globalization has brought significant changes to almost all aspects of life, including education. With the rapid development of information technology, geographical boundaries are becoming increasingly blurred, allowing the exchange of science and information to proceed unhindered. (Salsabila et al., 2023). It provides a vast opportunity but also a challenge for the world of education to adapt in preparing future generations ready to compete and collaborate on the global stage. (Hidayatullah et al., 2023).

Globalization has an impact on increased access to education. Digital technology allows students from all over the world to access learning materials, online courses, and

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other learning resources easily (Mesra et al., 2023). This tendency towards more open and inclusive learning not only enriches learning experiences, but also stimulates a more dynamic and diverse educational environment. (Putra & Aslan, 2020). On the other hand, it also demands that educational institutions and teachers develop curricula that are relevant to the needs of the times, integrate technology into the learning process, as well as prepare students with the skills needed in the global market. (Safira, R. 2023).

Moreover, globalization also promotes recognition of the importance of education that focuses on student character development, multicultural skills, and cross-cultural understanding. Creating citizens of the world who are not only academically competent, but also empathic, open, and able to interact effectively in a multicultural environment, becomes one of the primary objectives of education in this era. (Indrawati, S. M., & Kuncoro, A. 2021).

Nevertheless, the challenges we face are not inferior. Inequality of access to education remains a serious problem in various parts of the world (Gulson, K. N. (Ed.). 2024). Moreover, the shift towards more digital education raises concerns about infrastructure readiness, teacher training, and digital gaps that could widen inequality. Education must also be able to cope with the negative effects of globalization, such as the loss of local identity and excessive competitive pressure. (Williamson et al., 2023).

In the face of such challenges, education requires a holistic approach that not only focuses on academic development, but also takes into account the mental, social, and cultural readiness of students. (Sitopu et al., 2024). Inter-country collaboration, the development of inclusive educational technologies, as well as curriculum updates that respond to global change, are key to optimizing the potential of education in the age of globalization. (Guna et al., 2024; Hairiyanto et al., 2024). Thus, education can be one of the key pillars in preparing a generation that is not only capable of surviving, but also thrive in the midst of dynamic global challenges.

Madrasah, as an educational institution that plays an important role in the education system in many countries, must also adapt to these changes in order to remain relevant and be able to meet the needs of its pupils. (Zaini et al., 2023). The transformation of the madrasah has become critical, not only in the curriculum aspect, but also in the use of educational technology to improve the quality of learning. (Aslan, 2018).

The Madrasah, as an educational institution with a religious foundation, has a vital role in the formation of character and the cultivation of moral values in many societies. However, in today's global and digital age, matrasahs are being demanded to undertake transformations to remain relevant and meet the demands of education today. (Nazib et al., 2023).

The transformation of the madrasah does not mean neglecting the religious values and local wisdom that is the basis. Rather, this transformation is an attempt to unify those values with the knowledge and skills needed in the 21st century. This

includes improved curriculum quality, teaching methods, infrastructure, and technology integration into the teaching learning process. (Rosyadi et al., 2023).

This transformation effort is not free from challenges. Some of them are resource constraints, lack of training for educators in implementing new teaching methods and technologies, as well as resistance from some components of society who still believe that traditional education is the best. The condition raises questions about how to effectively integrate educational technology into the teaching learning process in the madrasah, so that we can the desired transformation. (Shobirin et al., 2023).

However, despite the challenges, the benefits of this transformation are crucial. By adjusting to the demands of the times, the madrasah can prepare its pupils well to face the increasingly competitive world of work and society. (Shobirin et al., 2023). Besides, through this transformation, the madrasah also has the potential to become a community-focused educational institution, capable of impressing generations of widespread knowledge and noble morality. For that, the transformation of the madrasah needs to be the concern of all parties, including the government, the educational community, and society. The support and collaboration of all these elements is essential to ensure the success of the transformation of the madrasah in printing a young generation that is intelligent, moral, and ready to face the challenges of the global era. (Anugerah, R. B. 2023; Wahyudin et al., 2023).

The study aims to explore how the use of educational technology can facilitate transformation in the madrasah. By understanding the potential benefits and challenges faced, the research is expected to provide practical recommendations for the madrasah in implementing educational technology. Through a comprehensive methodological approach, the study will explore various strategies that may be adopted by a madrasah to improve the effectiveness of learning and day-to-day operations.

Research Method

A method of literary research, or literary study, is a research approach that collects and analyzes data from literary sources relevant to a problem or topic of research. (Zed, 2004; Rachmawati, 2017; Rahardjo, 2011). This process involves searching for keywords to find suitable references, selection of quality materials, and synthesis of information to build a deeper understanding of the subject being studied. (Bungin, 2001; Moleong, 2007).

The phases in literary research methods include identifying sources, evaluating the relevance and credibility of sources, as well as combining findings from various sources to formulate evidence-based arguments or recommendations. Researchers use this method to get a comprehensive overview of existing research and to find gaps in knowledge that could be further explored. (Arikunto, 2013; Reay, 2014).

Result and Discussion

Education Transformation

Transformation refers to a significant or drastic change in an object, system, or self. This change involves not only a change in form or appearance, but also the structure, function, and essence of what is being changed. In short, transformation is the process of becoming or creating something very different from the original condition, not a small change or adaptation to change. (Anugerah, R. B. 2023).

Education is a systematic and planned process aimed at facilitating learning and cognitive, emotional, social, and physical development of students. (Tubagus et al., 2023). This includes teaching, training, and research to help individuals develop the knowledge, skills, values, and habits necessary to function as responsible and productive members of society. (Aslan & Shiong, 2023). Education is carried out through formal institutions such as schools, universities, and vocational training, as well as through non-formal and informal methods, such as home education or lifelong sustainable learning. (Muharrom et al., 2023).

Education is not only limited to cognitive or academic teaching, but also covers the moral and social aspects in which individuals are guided to develop character, ethics, and to be good citizens.

Transformation in the context of education refers to the process of continuous change and innovation in the educational system to realize learning goals that are more effective and relevant (Award, R. B. 2023). Transformations in education can involve various aspects such as teaching methods, curricula, technology, and the structure of educational organizations (Shobirin et al., 2023). Educational transformation focuses on how to make adjustments and changes guided by the vision and goals of education that are centered on the needs and abilities of learners. Thus, a variety of new methods and approaches can be used to support the success of students in learning and developing relevant skills in the future. (Syafuruddin et al., 2023).

In the world of education, digital transformation aims to create a productive and comfortable educational environment for all participants involved.

Educational Technology

Educational technology is an interdisciplinary field that uses concepts, tools, and technological processes to facilitate and improve the quality of teaching learning. (Wijayanto et al., 2023). More specifically, educational technology refers to the design, implementation, and evaluation of learning materials, techniques, and methods using information and communication technology (ICT) to support and enhance learning processes. It covers the development and use of applications, digital platforms, educational software, as well as hardware such as computers, tablets, and interactive boards in learning environments. (Al Husaeni, D. F., & Munir, M. 2023).

The main focus of educational technology is to enrich learning experiences and enhance learning achievement through more innovative and effective means. This includes aspects such as: 1) Facilitating the personalization of learning to suit the individual's learning speed and style. 2) Providing access to extensive learning resources through the Internet and various digital media. 3) Using multimedia and simulations to make learning materials more interesting and understandable. 4) Enabling communication and collaboration between students and teachers through online platforms. 5) Assisting in the management of educational systems through educational management information systems. (Al-Malah et al., 2023).

The use of technology in education is expected to bridge learning gaps, broaden access to education, and bring innovation to ways of teaching and learning. Thus, educational technology is not only limited to learning tools and applications but also includes an understanding of how such technology can be integrated into the learning process to better educational goals. (Nurhayati et al., 2023; Nurdiana et al., 2023).

Various technologies have evolved to support education and training. Some examples of technologies that can be used in education are: 1) the use of video as a teaching approach strategy, where the lesson material can be made more interesting and interactive with visual and audio. 2) Gamification, which utilizes game elements in the learning process to enhance student engagement and motivation. 3) e-learning platform, which allows students to access course materials, conduct quizzes and exams, as well as interact with other teachers and students online. 4) interactive dashboards and digital presentation tools, which facilitate interactive and collaborative learning in the classroom. 5) mobile technologies such as tablets and smartphones, which allow students to learn anywhere and at any time. 6) Learning Management Systems (LMS), which helps in organizing and tracking student learning progress. 7) Simulation tools and virtual laboratories, which enable students to experiment and learn complex concepts in a controlled and secure environment. 8) Software specifically designed to improve educational skills in various fields, such as mathematics, other languages, science and other sciences. (Strzelecki, A. 2023; Sarmila et al., 2023; Haddar et al., 2023).

With these tools and platforms, education becomes more flexible and can be adapted to the specific needs of users, be it teachers, students, or educational institutions.

Educational technology offers many benefits, both for students and educators. Here are some of the main benefits: 1) Improving Learning Efficiency: With technology, students can learn anytime and anywhere. It opens up opportunities for self-learning, guided learning, or group learning that can be adapted to the individual's learning speed and style. 2) Wider access: Technology also provides wider access to learning resources, including books, e-books, videos, interactive lessons, and other materials that may not be available locally. Through the use of technology in education, students will have the opportunity to develop and improve their digital skills. 4) More interesting learning:

Technology helps make learning more exciting and interactive, through the usage of multimedia, games, and creative-designed lesson applications. 5) Reducing education gaps: Technology can help reduce educational gaps by providing access to students who live in remote areas or who do not have adequate educational facilities. 6) Progress Tracking and Evaluation: Technology enables teachers and students to track and evaluate learning progress in real-time and accurately. 7) Effective Collaboration and Communication: Technology facilitates effective collaboration and communication between students and teachers, as well as between students. (Tuhuteru et al., 2023; Al Husaeni, D. F., & Munir, M. 2023; Al-Malah et al., 2023).

While educational technology offers many benefits, there are challenges to overcome, such as: 1) Digital gaps: Not all students have equal access to technology. This can create a digital gap, in which students who do not have adequate devices or internet connections are hampered in their learning process. 2) Teacher training: Teachers need to have adequate skills to integrate technology into learning. Without proper training, they might have trouble using technology tools effectively. 3) Data Security and Privacy: When using technology, there are risks associated with the security and privacy of student and school data. Institutions must ensure that data is protected from unauthorized access and abuse. 4) Health Impacts: Excessive use of technology can have a negative impact on health, including vision problems and lack of mobility that can affect the physical condition of students. 5) Implementation costs: The costs of updating the technology infrastructure, purchasing devices, and training systems can be very high. It often becomes an obstacle especially in areas with limited education budgets. 6) Technology dependence: There is a risk that students become overly dependent on technology, which may reduce their ability to learn independently and solve problems without the help of technology. 7) Distraction: Technology can often be a source of distraction for students, for example when using it to access social media or games during school hours. 8) Content Quality: Ensuring that content available online is accurate, relevant, and suitable for learning is a challenge of its own. 9) Curriculum Change: The integration of technology into education often has to be accompanied by curriculum changes, which can be a complex and time-consuming process. 10) Technical Competence Students: Students need to be taught basic computer and Internet skills in order to be able to use technology effectively, and this can be an additional learning burden (Haque et al., 2023; Strzelecki, A. 2023).

Faced with these challenges, collaboration between educators, parents, students, and policymakers is crucial to developing effective strategies so that technology can be successfully integrated into education.

The transformation of the madrasah and the use of technology in education

Madrasah has become a key institution in Indonesia, making a significant contribution to the development of Islamic education. The transition of Madrasah from

private to public status, known as the "Penerangan Madrasah," is a process in which educational institutions including Raudlatul Athfal (RA), Madrasah Ibtidaiyah (MI), Tsanawiyah (MTs), Aliyah (MA), and Maharashtra Aliyah Kejuruan (MAK) have changed from being operated by the community to being run by the government. The process aims to integrate these Islamic educational institutions more closely into the national education system, ensuring wider access to quality education while preserving their religious foundations. (Rusdarti et al., 2023).

In addition to the transition process, the development and implementation of the Madrasah Development Plan (RPM) serves as an effective tool for improving the quality of Islamic education in Indonesia. The RPM focuses on a comprehensive strategy that includes curriculum development, teacher training, improvement of facilities, and public involvement to ensure that Muslim education meets national standards of quality education while fostering the moral and spiritual growth of its pupils. Both processes highlight the commitment of the Indonesian government to improve the standard of Muslim education through Madrasah, ensuring that these institutions can provide a balanced education that serves the spiritual and academic needs of its students. (Rusdarti et al., 2023; Siskandar, S. 2020).

Madrasah is an Arabic word that means school. In Indonesia, a madrasah is designated as a school whose curriculum contains religious lessons. (Al-Hasani, S. M. A. 2019).

The transformation of the madrasah has covered many aspects, ranging from curricula, teaching methods, to the use of technology in the learning process. The process of transformation is aimed at improving the quality of education in the madrasah, preparing students with skills relevant to the 21st century, and making it an educational institution that can compete both nationally and internationally. (Al-Hasani, S. M. A. 2019).

Use of Technology in Education, including; 1) Integration of ICT (Information and Communication Technology) in Learning: The use of information and communication technology has become an integral part of the learning process in the madrasah. The use of e-learning platforms, educational applications, and online resources makes it easier for students to access lesson materials and work on their homework. 2) Online Teaching and Blended Learning: The COVID-19 pandemic accelerates the adoption of online teaching and the concept of blended learning, combining conventional and online learning methods. This allows learning to be more flexible and accessible by students from anywhere. 3) Using Social Media as a Learning Tool: Social media and communication platforms such as WhatsApp, Telegram, and Facebook, are used to support the learning process, both for discussions, tasks, and important announcements related to teaching learning activities. 4) LMS (Learning Management System): Using LMS such as Moodle, Schoology, or other similar platforms helps teachers in distributing lesson materials, managing tasks, quizzes, and monitoring

student learning progress more efficiently and effectively. 5) Digitization of Learning Resources: The transformation of the madrasah also includes digitization of textbooks and other learning resources, making them more accessible to students and teachers, and supporting environmentally friendly policies through reducing paper use. (Ali et al., 2024; Syaipudin et al., 2024).

The transformation and application of technology in madrasah education has brought many benefits, including improved learning quality, time and resource efficiency, and wider access to quality educational material. This enables madrasah students to acquire not only science and religious values, but also digital and critical skills that are essential for their future (Bakar, M. A. (Ed.). 2017).

However, this transformation also presents challenges, such as the need to increase technology infrastructure capacity, train teachers to enhance digital competence, and ensure equal access to learning technology for all students, especially in remote areas. (Al-Hasani, S. M. A. 2019; Astuti et al., 2023).

In conclusion, the transformation of the madrasah by integrating technology into education marks a significant step forward towards improving the quality of Islamic education and has great potential in preparing a young generation that is not only superior in religious science, but also focused on the technology and skills of the 21st century.

Conclusion

The transformation of the madrasah through the use of educational technology reflects a step forward in responding to current and future educational needs. With the integration of technology, the madrasah can leverage a variety of digital tools and applications to enhance the learning process, making it more interactive, engaging, and efficient. Important aspects of this transformation include increased access to broader learning resources, the ability to conduct distance learning, and the use of teaching methods that can be tailored to the individual needs of students. This demonstrates that with the utilization of technology, madrasah not only improves the quality of education but also extends the scope of access to education to the wider community.

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