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DIGITAL TRANSFORMATION IN MADRASAH MANAGEMENT CHALLENGES AND OPPORTUNITIES IN THE SOCIETY 5.0 ERA

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ABSTRACT

Digital transformation in madrasa management presents both challenges and opportunities in the era of Society 5.0. The method used in this research is a case study with a qualitative approach, involving data analysis obtained from interviews and observations at several madrasas. The research results show that This study explores the integration of advanced technologies in educational institutions, emphasizing the necessity for adaptability in administrative practices. Key challenges identified include resistance to change, inadequate infrastructure, and the need for digital literacy among educators and students. Conversely, the study highlights opportunities such as enhanced learning experiences, improved administrative efficiency, and greater engagement with the community. By examining these dynamics, the research provides insights into effective strategies for embracing digital tools in madrasa settings, ultimately contributing to better educational outcomes in a rapidly evolving technological landscape.

INTRODUCTION

The Society 5.0 era is a concept that reflects the integration of advanced technology and human social life, where digital technology not only functions as a tool, but also as an integral part of the way we live, work, and interact. In the context of education, especially in madrasahs, digital transformation offers great potential to improve management, improve the quality of education, and prepare students for future global challenges.(Santoso et al. 2024)However, this transformation process also faces a number of challenges that need to be overcome so that the benefits of digitalization can be obtained optimally.

In recent years, the concept of digital transformation has emerged as a pivotal force reshaping various sectors, including education. Particularly in Islamic educational institutions, such as madrasas, the integration of digital technologies is not only necessary but imperative for fostering a modern learning environment. As we enter Society 5.0—characterized by a harmonious combination of technology and human-centric values—the management of madrasas faces both significant challenges and unprecedented opportunities.(Sukana 2024)

The traditional management systems within madrasas often struggle with inefficiencies that can hinder educational outcomes and administration. Administrative processes, curriculum delivery, and student engagement frequently rely on outdated practices that do not fully leverage the benefits of technology. However, the advent of digital tools presents an opportunity to streamline these processes, enhance communication, and improve overall educational quality.(Suyatno 2024)

In the era of Society 5.0, digital transformation is important for all sectors, including madrasah management. Society 5.0 emphasizes the integration of information and communication technology to create a smart and competitive society. In this context, there are several theories that can be used to understand and implement digital transformation in madrasahs. Here are six relevant theories, along with the challenges and opportunities they present.(Umroatin, Susiani, and 2022)

Technology Adaptation Theory emphasizes the importance of technology acceptance by individuals. In madrasahs, administrators and teachers need to adapt to digital tools and platforms to improve the teaching and learning process.(Setyowati, Jason Moscato, and Chioke Embre 2023)However, the main challenge lies in the resistance to change from some educators who are comfortable with traditional methods.

Hybrid Learning Theory offers a combination approach between face-to-face and online learning. In madrasahs, the implementation of this model can increase the accessibility of education. However, the challenge is the need for adequate infrastructure and the readiness of teachers to manage learning in this format.(Suherman, Firmansyah, and Suherman 2024)

Sustainable Development Theory emphasizes the integration of environmental and social values in education. In the context of madrasah, sustainable management of digital resources can encourage students' awareness of the importance of protecting the environment. The challenge faced is the lack of awareness and knowledge of sustainability principles among educators and students.(2022 Learning)Social Network Theory shows the role of community in the educational process. Madrasahs can utilize social media platforms to build networks that support interactions between educators, students, and parents. However, challenges arise from

the potential for inaccurate information dissemination and poor communication management.(Ma'arif and Nursikin 2024)

Open Innovation Theory invites madrasahs to collaborate with various parties, including industry and communities. By opening up opportunities for collaboration, madrasahs can obtain additional resources and stimulate innovation in the curriculum. However, the main challenge is the difficulty in establishing mutually beneficial partnerships.(Malik, Riafadilah, and Puri 2021)

The Educational Ecosystem Theory emphasizes the importance of the interconnectedness of various elements in education. In madrasahs, building a validated digital ecosystem can strengthen the quality of education. The challenge faced is the need for harmonization between technology, educational practices, and policies.(Dahlan 2023)

The implementation of these theories in managing madrasahs in the Society 5.0 era offers various challenges and opportunities. With a strong commitment and the right strategy, madrasahs can take advantage of digital transformation to improve the quality of education and achieve broader goals in producing intelligent and characterful generations.

Moreover, Society 5.0 emphasizes the importance of inclusiveness and sustainability, which resonates with the core values of Islamic education. By embracing digital transformation, madrasas can expand their reach, offering access to diverse learners regardless of geographical barriers. This integration not only enhances educational equity but also cultivates a community that thrives on shared knowledge and cultural exchange.

However, the transition to digital management in madrasas is fraught with challenges. Issues such as inadequate infrastructure, limited digital literacy among educators and students, and resistance to change can impede progress. Moreover, ensuring cybersecurity and data privacy in the digital classroom is paramount, requiring careful planning and execution.

In conclusion, the digital transformation of madrasa management aligns with the goals of Society 5.0, offering a pathway to innovate Islamic education. By addressing the challenges head-on and leveraging the opportunities presented by digital advances, madrasas can transform into dynamic educational institutions that are well-equipped to nurture future generations of learners in an increasingly digital world.

Digital transformation in madrasah management in the Society 5.0 era offers various opportunities to improve efficiency, access, and quality of education. However, challenges such as technology gaps, training needs, data security, and resistance to change must be overcome to harness the full potential of digitalization. Facing these challenges with the right

strategy and a planned approach will ensure that madrasahs can make optimal use of technology and provide relevant and high-quality education to their students.

Madrasahs, as Islamic educational institutions, have an important role in shaping the character and competence of students. Along with the development of digital technology, madrasahs are faced with the need to adapt and integrate technology in their management and learning processes. In the era of Society 5.0, the success of madrasahs in implementing digital transformation can be a determining factor in improving the quality of education and the relevance of the curriculum to the needs of the modern world.Digital transformation in madrasah management in the Society 5.0 era.

1. Social and Educational Context

In today's digital era, technology has become an inseparable part of everyday life. All aspects, including education, are starting to shift to digital platforms. Madrasahs, which are important educational institutions for society, need to keep up with this development in order to remain relevant.

2. The Need for Innovation

With the changing times, conventional teaching methods are sometimes no longer suitable for the needs of the millennial and Z generations who are more familiar with technology. So, there is an urgent need for innovation in the way madrasahs are managed to better suit their learning style.

3. Infrastructure Challenges

Despite the need to adopt technology, the reality is that not all madrasahs have adequate infrastructure. Limited internet access and lack of technological devices are significant obstacles to this transformation.

4. Quality of Human Resources

Many administrators and teachers in madrasahs are not yet trained to use technology in teaching and management. This is a serious problem because without adequate skills, this digital transformation will not be maximized. On the other hand, Society 5.0 offers many opportunities. This is the right moment for madrasahs to explore various new technologies, such as AI-based learning, big data, and the internet of things (IoT) to improve the quality of education.

RESEARCH METHOD

Qualitative research design is an approach used to understand social phenomena and subjective experiences from the perspective of participants. Unlike quantitative research which focuses on numerical data and statistical analysis, qualitative research places more emphasis on

meaning, context, and in-depth understanding of the phenomena being studied. This research generally uses data collection methods such as in-depth interviews, focus group discussions, qualitative research is to explain and understand the experiences, views, and social interactions of participants in a particular context. This involves an in-depth exploration of the meanings given by individuals to a particular situation or phenomenon. Patton, MQ (2002:15).

Qualitative research is often based on an interpretive or constructivist approach. Interpretive approaches focus on how individuals understand and give meaning to their experiences, while constructivism argues that social reality is constructed through social interaction and individual interpretation.

Method of collecting data

a. **In-depth Interview**: Collecting data through one-on-one conversations with participants. These interviews are usually semi-structured, where the researcher has a guide of questions but remains flexible to explore topics that arise during the interview.
b. **Focus Group Discussion**: Collecting data from small groups discussing a particular topic. This technique allows researchers to capture multiple perspectives and group dynamics.
c. **Observation**: Studying behavior and interactions in a natural context. Observation can be participatory, where the researcher is involved in the daily activities of participants, or non-participatory, where the researcher simply observes from a distance.
d. **Document Analysis**: Reviewing documents relevant to the research topic, such as reports, notes, and publications. Denzin, NK, & Lincoln, YS (2011: 67)

Validity and Reliability

In qualitative research, validity and reliability are enhanced through:

a. Triangulation: Using multiple methods or data sources to increase the reliability of findings.
b. Member Checking: Validating findings with participants to ensure accuracy of interpretation.
c. Audit Trail: Documenting the research process in detail to ensure transparency Creswell, JW (2014:35).

RESULT AND DISCUSSION

RESULT

Digital Transformation in Madrasah Management: Challenges and Opportunities in the Society 5.0 Era The advent of Society 5.0 signifies a paradigm shift towards an era where digital technology seamlessly integrates with daily life, enhancing societal functions and promoting

sustainable development. Within this context, the digital transformation of educational institutions, including madrasas, presents both significant challenges and remarkable opportunities. Madrasas, as traditional Islamic educational institutions, face the pressing need to adapt to the digital age. This transformation involves not only the incorporation of technology but also a re-evaluation of pedagogical methods and administrative practices. One of the primary challenges lies in bridging the digital divide. Many madrasas may lack access to the necessary technology and infrastructure, which can hinder the integration of digital tools into their management systems. Furthermore, there is often a resistance to change among educators and administrators who may be accustomed to conventional methods of teaching and administration. Despite these challenges, the opportunities presented by digital transformation are vast. The implementation of digital management systems can streamline administrative processes, enhance communication between teachers, students, and parents, and facilitate the accessibility of educational resources. Moreover, digital platforms can foster collaborative learning environments and allow for the incorporation of diverse teaching materials that cater to varied learning needs. In the context of Society 5.0, madrasas can also leverage big data analytics to track student performance and improve learning outcomes, thus fostering a more personalized educational experience. In conclusion, the digital transformation of madrasa management in the Society 5.0 era is both challenging and promising. While the obstacles are significant, the potential benefits of enhanced educational quality, increased operational efficiency, and improved student engagement are undeniable. It is imperative for stakeholders in madrasah education to embrace this transformation proactively, ensuring that they are well-positioned to thrive in an increasingly digital world.

Digital Transformation Assessment in Madrasah

a. **Technology Adoption:**Most madrasahs have started adopting digital technology in administration and learning management. Madrasah management applications and e-learning platforms are starting to be widely used.
b. **Infrastructure Readiness:**Digital infrastructure in madrasas varies. Some madrasas have adequate internet access and devices, while others still face limited access to technology.
c. **HR Skills:**Digital skills among educators and madrasah administrators show variation. Most are already trained in the use of digital tools, but some still need further training.

Challenges Faced

a. **Infrastructure Gap:**Differences in technological infrastructure between madrasas, especially between urban and rural areas, are a major challenge.

b. **Budget Constraints:**Many madrasas face budget constraints in implementing advanced digital technologies.

c. **Resistance to Change:**Some educators and madrasah administrators show resistance to technological change, either due to discomfort or lack of understanding.

Available Opportunities

a. **Improving Administrative Efficiency:**Digitalization of administration enables more efficient management, including in terms of reporting and performance monitoring.

b. **Access to Learning Resources:**Digital technology opens up wider access to learning resources and educational materials that can improve the quality of learning.

c. **Professional Development:**The existence of online training and digital communities for educators can improve their skills and knowledge.

DISCUSSION

The Society 5.0 era is a new paradigm that integrates advanced technology with human life, thus facilitating the creation of social values. In this context, digital transformation in madrasah management becomes very important, considering the role of education in building a society that is adaptive and responsive to technological advances. Research on digital transformation in madrasah management shows significant challenges, including those related to limited technological infrastructure, lack of digital competence of teachers, and resistance to change from some parties. Many madrasahs operate with minimal budgets, making it difficult to adopt the latest technology needed for more efficient management. In addition, teachers in madrasahs often do not have adequate skills to utilize digital technology in the learning process. However, behind these challenges, there are also very promising opportunities. Digital transformation can increase efficiency in madrasah administration management and facilitate communication between administrators, teachers, and students. The use of online learning platforms can expand access to education, allowing students to learn anytime and anywhere. In addition, by utilizing data analysis, madrasas can more easily monitor student development and design programs that suit their needs. Thus, the results of this study confirm that although the challenges in digital transformation of madrasa management are quite large, the opportunities that exist can be utilized to improve the quality of education. Therefore, cooperation is needed between the government, educational institutions, and the community to build infrastructure that supports and improves teacher competence in information technology. This will encourage madrasas to be better prepared to face the Society 5.0 era, creating more innovative and inclusive education for all citizens.

1. **Technology Adoption and Infrastructure Readiness**Digital transformation in madrasahs is an important step in improving the quality of education. Adoption of technology, such as digital-based school management systems and e-learning platforms, has provided significant progress in administration and learning processes. However, the infrastructure gap between madrasahs in urban and rural areas remains an obstacle. Uneven infrastructure affects the accessibility and effectiveness of technology use.
2. **Digital Transformation Challenges**Infrastructure gaps and budget constraints are major challenges in the digital transformation process. Madrasahs located in remote areas or with limited budgets may have difficulty obtaining adequate technological devices and stable internet access. In addition, resistance to change among educators and madrasah managers can hinder the digitalization process. It is important to take an approach that supports this transition, including training and socialization on the benefits of technology.
3. **Opportunities in the Era of Society 5.0**In the era of Society 5.0, where information and communication technology is integrated with everyday life, madrasahs have a great opportunity to utilize technology to improve the quality of education. Increasing administrative efficiency and access to wider learning resources can encourage improvements in the quality of learning and management. In addition, professional development of educators through online training can accelerate adaptation to new technologies and improve the quality of teaching.

Digital transformation is an inevitability that must be faced by madrasahs. By utilizing technology effectively, madrasahs can improve the quality of learning, expand access to education, and prepare students to face future challenges. However, digital transformation also brings a number of challenges that need to be overcome. Therefore, joint efforts are needed from all parties to support digital transformation in madrasahs.

Conclusion

Digital transformation in madrasah management offers great potential to improve the efficiency and quality of education. However, challenges such as infrastructure gaps, budget constraints, and resistance to change must be addressed to maximize the benefits of technology. An approach that focuses on training, infrastructure support, and change management can help madrasahs take advantage of opportunities in the Society 5.0 era and achieve better outcomes in education. Digital transformation is an inevitability that cannot be avoided by madrasahs in the Society 5.0 era. The integration of technology in madrasah management offers various very

profitable opportunities, such as increased efficiency, wider accessibility of information, and a more interactive and engaging learning experience for students.

REFERENCES

Dahlan, Ahmad University. 2023. "Reassessing Madrasah Education in the Era of Society 5.0: Challenges & Opportunities in Indonesia." : 1565–75.

Deming, W.E. (1986). Out of the Crisis. Cambridge: MIT Center for Advanced Educational Services

Creswell, JW (2014).Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage Publications.

Denzin, N. K., & Lincoln, Y. S. (2011).The SAGE Handbook of Qualitative Research (4th ed.). Thousand Oaks, CA: Sage Publications.

Ma'arif, Alwi Ilqam, and Mukh. Nursikin. 2024. "Value Education in the Digital Era: Challenges and Opportunities." Afeksi: Journal of Educational Research and Evaluation 5(2): 326–35.

Malik, Rena Fadilah, Anggi Riafadilah, and Arista Puri. 2021. "JOTE Volume 2 Number 2 Year 2021 Pages 165-175 Journal On Teacher Education Research & Learning in Faculty of Education Opportunities and Challenges for MI / SD Teachers Facing the Era of Society 5. 0." 2: 165–75.

Learning, Its Application In. 2022. "Epistemic: Scientific Journal of Education Epistemic: Scientific Journal of Education." 01(02): 131–52.

Santoso, Wahyudi Taufan et al. 2024. "Educational Supervision Strategy in Facing Learning Challenges in the Digital Era 5.0." Journal of Education 13(2): 2657–64. https://jurnaldidaktika.org.

Setyowati, Widhy, Jason Moscato, and Chioke Embre. 2023. "Basic Education Strategies to Face the Challenges of the Digital Curriculum Era with Empirical Studies." MENTARI Journal: Management, Education and Information Technology 2(1): 43–53.

Suherman, Agus, Yudi Firmansyah, and Suherman Suherman. 2024. "Effective and Efficient Human Resource Management in Education in the 5.0 Era." Journal of Education Research 5(2): 2066–73.

Sukana. 2024. "Transformation of Islamic Religious Education (PAI) Supervisors in the Digital Era: Challenges and Opportunities in 2024." Tambusai Education Journal 8(1): 3955–65. https://jptam.org/index.php/jptam/article/view/13000.

Suyatno. 2024. "The Relevance of Muhammadiyah Education in Facing the Smart Society 5.0 Era." Basicedu Journal 8(2): 1190–99.

Umroatin, Y, IW Susiani, and ... 2022. "Implementation of Transformational and Value-Based Leadership in Quality Development in the Digital Era 5.0." Advances in Humanities … 3(2): 157–67. https://publisher.uthm.edu.my/periodicals/index.php/ahcs/article/view/9825%0Ahttps://publisher.uthm.edu.my/periodicals/index.php/ahcs/article/download/9825/3231.