

TECHNOLOGY-BASED ISLAMIC EDUCATION MANAGEMENT: STUDIES ON THE USE OF TECHNOLOGY IN THE LEARNING PROCESS

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ABSTRAK

Penelitian ini membahas integrasi manajemen pendidikan Islam dengan pemanfaatan teknologi informasi dan komunikasi (TIK) dalam rangka meningkatkan kualitas pembelajaran di era digital. Perkembangan teknologi yang sangat pesat telah mendorong dunia pendidikan, termasuk lembaga pendidikan Islam, untuk beradaptasi dan berinovasi agar tetap relevan dan efektif dalam menjalankan proses pembelajaran. Tujuan dari kajian ini adalah untuk menganalisis bagaimana teknologi diterapkan dalam manajemen pendidikan Islam dan sejauh mana dampaknya terhadap proses pembelajaran, baik dari aspek perencanaan, pelaksanaan, hingga evaluasi. Metode yang digunakan adalah studi literatur (library research) dengan menelaah berbagai sumber ilmiah, baik jurnal nasional maupun internasional, yang relevan dengan tema. Hasil kajian menunjukkan bahwa integrasi TIK dalam manajemen pendidikan Islam mencakup beberapa aspek penting: digitalisasi administrasi sekolah, pengembangan kurikulum yang berbasis teknologi, pemanfaatan platform pembelajaran daring, penggunaan media interaktif dalam kegiatan belajar-mengajar, serta sistem evaluasi berbasis aplikasi digital. Integrasi ini membawa dampak positif terhadap peningkatan efisiensi manajerial, perluasan akses informasi, dan peningkatan mutu proses pembelajaran. Namun demikian, keberhasilannya sangat dipengaruhi oleh kesiapan infrastruktur teknologi, kompetensi SDM (guru dan tenaga kependidikan), serta dukungan kebijakan dari pihak manajemen dan pemerintah. Oleh karena itu, diperlukan strategi yang menyeluruh dan berkelanjutan agar transformasi digital dalam pendidikan Islam dapat berjalan optimal dan menjawab tantangan zaman secara adaptif dan progresif.

Kata Kunci: Manajemen Pendidikan Islam, Teknologi Informasi, Pembelajaran Digital, E-learning.

ABSTRACT

This research discusses the integration of Islamic education management with the use of information and communication technology (ICT) in order to improve the quality of learning in the digital era. The rapid development of technology has encouraged the

world of education, including Islamic educational institutions, to adapt and innovate to remain relevant and effective in carrying out the learning process. The purpose of this study is to analyze how technology is applied in the management of Islamic education and the extent of its impact on the learning process, both from the aspects of planning, implementation, and evaluation. The method used is a literature study (library research) by examining various scientific sources, both national and international journals, that are relevant to the theme. The results of the study show that the integration of ICT in Islamic education management includes several important aspects: digitization of school administration, development of technology-based curriculum, use of online learning platforms, use of interactive media in teaching and learning activities, and digital application-based evaluation systems. This integration has a positive impact on improving managerial efficiency, expanding access to information, and improving the quality of the learning process. However, its success is greatly influenced by the readiness of technological infrastructure, the competence of human resources (teachers and education personnel), and policy support from management and the government. Therefore, a comprehensive and sustainable strategy is needed so that digital transformation in Islamic education can run optimally and respond to the challenges of the times in an adaptive and progressive manner.

Keywords: *Islamic Education Management, Information Technology, Digital Learning, E-learning.*

INTRODUCTION

The development of information and communication technology (ICT) has had a major and fundamental impact on various sectors of life, including in the field of education. In the era of the industrial revolution 4.0 followed by the era of society 5.0, digitalization has become part of daily life. This digital transformation is no longer just an option, but has become a necessity that must be responded to actively, carefully, and strategically by all educational institutions, including Islamic education. Technology has developed from just a tool to a key element in supporting more adaptive, efficient, and quality management and learning processes (Mustakim, 2022).

In the midst of such a rapid flow of global change, Islamic educational institutions as an integral part of the national education system face a major challenge: how to maintain classical Islamic values while adapting to modern technology? Islamic education is not only tasked with transmitting knowledge and moral values, but must also be able to equip students with relevant digital

competencies so that they can live with dignity in an all-digital society. Therefore, the integration between Islamic education management and technology is urgent to be implemented in a structured and comprehensive manner.

Conceptually, Islamic education management is a process that includes planning, organizing, implementing, and supervising all educational activities based on Islamic values (Ahmadi, 2019). Core values such as trust, justice, integrity, deliberation, and responsibility are the foundations that underlie all managerial activities in Islamic education. However, in practice, many Islamic educational institutions still apply a conventional management system. Processes such as administration, reporting, schedule management, learning evaluation, and data archiving are still carried out manually, resulting in low efficiency, limited access to information, and slow decision-making.

The integration of technology in the management of Islamic education offers real solutions to these problems. Various digital innovations are available and can be used to strengthen the education governance system. The use of Learning Management Systems (LMS), e-learning, academic information systems, digital communication platforms, and web-based school administration applications is a concrete example of how technology can increase efficiency and transparency in education management (Mustakim, 2022). LMS, allows teachers to design teaching materials, share assignments and quizzes, and monitor student learning progress in real time. E-learning provides flexibility for students to learn anytime and anywhere. Social media can also be used as an educational medium, building a learning community, and establishing more intense communication between students, teachers, and parents. In fact, today's technology has enabled the integration of students' academic, financial, and personal data into one unified cloud-based system that supports fast and data-driven decision-making.

Unfortunately, despite the various potentials available, the implementation of technology in Islamic education management still faces many challenges. Based on reports and findings in the field, there is a considerable disparity in the application of technology between schools in urban and rural areas, between public and private madrasas, and between institutions that have digital policy support and those that do not. The challenge includes three main aspects: infrastructure, human

resources, and regulation. First, limited infrastructure is a fundamental obstacle. Many Islamic educational institutions do not have adequate technological tools such as computers, stable internet networks, servers, or academic information systems (Huda, 2020). Second, the low digital literacy of educators and education personnel is a serious challenge. According to a survey by the Ministry of Education and Culture (2022), more than 35% of madrasas in Indonesia have not actively implemented technology-based learning, and more than 40% of teachers admit that they still have difficulties in using digital devices to teach (Ministry of Education and Culture, 2022). Third, the lack of support for internal policies and institutional regulations is also an (Hidayati, 2021).

However, this assumption needs to be straightened out. Technology is not the opponent of Islamic values, but rather a tool that can be used to support and disseminate these values more widely and dynamically. Through the right approach, technology can be used to strengthen da'wah, expand online Islamic studies, provide access to classical and contemporary literature, and build a global Islamic community network. Qur'an memorization applications, Islamic studies podcasts, online classes on fiqh and tafsir, and Islamic e-books are some examples of digital innovations that support the mission of Islamic education (Imron, 2020).

Seeing the challenges and potentials that exist, a comprehensive study of technology-based Islamic education management is needed. This article aims to provide a comprehensive understanding of the importance of digital transformation in Islamic education management.

This study uses a mixed methods approach (combination of qualitative and quantitative) through library research design combined with field studies at Al-Mubaarok High School, Jatiasih, Bekasi. The choice of this location is strategic because the school has implemented various technology-based systems such as e-learning and digital presence. With the purposive sampling technique, the researcher involved school principals, teachers, and students in grades XI and XII as the main informants. Data was collected comprehensively through in-depth interviews, Focus Group Discussions (FGDs), and questionnaires that measured the frequency and perception of digital platform use. Data analysis was carried out thematically for qualitative dimensions and descriptive statistics for quantitative

data to present an accurate empirical picture. This systematic research procedure aims to evaluate the effectiveness of technology in the management of Islamic education while producing contextual practical recommendations. The results of the research are expected to be able to make a significant contribution in building an efficient, sustainable, and highly competitive digital learning model in the current era of educational transformation.

DISCUSSION

A. Analysis of Findings from the Field

The results of research at **Al-Mubaarok High School, Jatiasih Bekasi**, which was conducted through in-depth interviews, focus group discussions (FGDs), and the dissemination of questionnaires, show that the implementation of technology in management and learning processes has been running gradually with encouraging results, although not evenly.

1) Use of LMS Platforms and Digital Applications

Most teachers and students stated that they were familiar with the use of Learning Management System (LMS) platforms such as Google Classroom, Moodle, and in some cases used Zoom and YouTube as support for online learning. Teachers use LMS to compile teaching materials, assign assignments, provide assessments, and monitor student activities online. LMS features enable personalization of learning and expand interaction spaces outside of school hours.

2) Digital-Based Administration Efficiency

Digital transformation is also seen in the school administration system. The school has implemented digital presence, online grade filling, and e-Raport which is integrated into the cloud-based Academic Information System (SIA) (Wulandari, 2021). Before the transformation, administrative processes such as score recaps, attendance reports, and archive management were done manually, making them time-consuming and error-prone. After switching to digital systems, the speed of service increased significantly, and the entire process became more transparent and easy to audit. The data can also be accessed at any time by the authorities, including the student's guardian.

3) Digital Competence of Teachers and Students

Another important finding is the digital competency gap, both among teachers and students. Young teachers tend to be more adaptive and innovative, actively use learning applications, and are more open to new technology-based learning approaches. In contrast, some senior teachers still show obstacles, both technically and psychologically, in operating the learning software.

B. Challenges of Technology Implementation in Islamic Education

Management

Although digitalization has begun to be implemented, its implementation in Islamic educational environments such as Al-Mubaarok High School faces various challenges that need to be seriously addressed. These challenges are structural, technical, and cultural.

1. Limitations of Technology Infrastructure

One of the main obstacles is the limited infrastructure that supports ICT implementation. Some classrooms still don't have adequate Wi-Fi access. Devices such as LCD projectors, computers, and network modems are only available to a limited extent, and not all teachers have personal laptops. This condition makes it difficult to implement technology-based learning consistently in all classes.

2. Low Digital Literacy

Not all teachers and students have adequate digital literacy skills. Some teachers are only used to using communication applications such as WhatsApp, and etc.

3. Resistance to Change

Some teachers and education staff still view technology with skepticism. They worry that the use of technology will diminish the essence of direct interaction, obscure spiritual values, or even disrupt the integrity of traditional learning cultures. This shows that there is cultural resistance to digital transformation that needs to be overcome with a dialogical and educational approach.

4. Absence of Strategic Policy

Most Islamic schools do not yet have official regulations or policy documents related to the integration of technology in their education systems. At Al-Mubaarok High School, although the principal has taken the initiative to implement

digitalization, there is no SOP (Standard Operating Procedure) that regulates digital workflows systemically.

5. Budget and Resource Limitations

Private Islamic schools such as Al-Mubaarok High School, which rely on operational funds from student tuition fees, often face limitations in meeting these needs. As a result, some digitalization initiatives have been hampered by the lack of special funds for ICT investment.

C. Strategic Solutions Offered

To face various challenges in the application of technology in Islamic educational institutions, solutions are needed that are not only technical, but also touch structural, cultural, and pedagogical dimensions simultaneously. This solution cannot be realized instantly, but needs to be designed in the form of a program that is gradual, measurable, sustainable, and involves all stakeholders collaboratively (Mustakim, 2022).

1. Gradually Strengthening Technology Infrastructure

The first step that must be taken is to strengthen the digital infrastructure that is the backbone of educational transformation. Local and central governments need to allocate education budgets for the provision of school internet networks, the procurement of computer and tablet devices, as well as supporting facilities such as projectors and local data servers (Muhammad, 2022).

2. Digital Literacy Training and Continuous Mentoring

Digital transformation will not succeed without increasing the capacity of human resources, especially teachers, education staff, and students. Therefore, training should not be one-way or incidental. A structured, tiered digital literacy training program (basic, intermediate, advanced), and based on direct practice is needed (Mustakim, 2022).

3. Preparation of School Digitalization Policies and SOPs

To create a direction and consistency of implementation, schools need to have written policies related to digitalization. This document includes the school's digital vision and mission, guidelines for the use of LMS, data security regulations, procedures for using digital devices and applications, and media ethics for students and teachers (Hasan, 2022).

4. Development of Adaptive and Contextual Digital Curriculum

The integration of technology in learning needs to be aligned with an adaptive, contextual, and Islamic curriculum. This means that teaching materials are not only packaged in digital format, but also adjusted to the character of students, local school conditions, and the latest technological developments. Concrete examples of implementation are the use of digital applications for memorization of the Qur'an, interactive video-based fiqh simulations, student da'wah vlogs, and multimedia-based learning e-modules.

5. Digital Leadership and School Leadership Commitment

The success of digital transformation in schools is largely determined by the leadership quality of the principal and management team. Digital leadership is needed, which is the ability of leaders to read the direction of technological developments, make data-based decisions, and encourage innovative culture in the school environment (Zaenudin, 2022). Visionary principals not only play a role as policy makers, but also role models in the use of technology (Abdul, 2021).

6) Utilization of Technology Based on Islamic Values

Technology in Islamic education is not just a technical aid, but must also be used as a medium for da'wah and character building. Islamic schools need to direct the use of technology to strengthen students' spiritual, moral, and social values (Hidayati, 2021). Some examples of integrating Islamic values in technology include: dhikr and daily prayer applications, online discussion forums about hadith and interpretation, student da'wah content sharing platforms, and the use of social media for campaigns of kindness and noble morals (Suryani, 2021).

D. Practical Implications and Implementable Recommendations

The findings of this study not only enrich theoretical insights, but also provide strong practical implications for the development of technology-based Islamic education management policies and practices, particularly at the secondary school level. In facing the digital era, Islamic educational institutions need to be adaptive, innovative, and transformative. Some of the following recommendations can be concrete steps in realizing a modern and value-based management system (Mustakim, 2022).

- 1) Strengthening the Role of School Principals as Agents of Change

School principals have a strategic position as the main driver of digital transformation. It is not enough to just be an administrator, the principal needs to act as a visionary, a companion of change, and a digital role model. Transformative leadership is needed to create a school culture that is open to innovation and technology (Zainudin, 2021).

2) Formation of School Educational Technology Team

Each school is recommended to form a School ICT Team consisting of young teachers, IT staff, and students who have an interest in technology. This team functions as an internal digital innovation center that is responsible for managing learning technology, organizing internal training, and providing technical assistance to other teachers (peer-coaching) (Suryani, 2022)

3) Integrating Digital Literacy in Islamic Extracurriculars

Digital literacy can not only be taught in the classroom, but also through interesting and educational extracurricular activities. Schools can design creative extracurricular programs, such as digital da'wah media clubs, Islamic coding communities, da'wah content design, and educational podcast production (Fadillah, 2021).

4) Optimization of BOS Funds and CSR Collaboration

Funding is an important element in supporting the digitalization of schools. Therefore, optimizing the use of BOS Funds for the procurement of ICT devices, teacher training, and digital learning content development must be a priority. In addition, schools can also establish partnerships with companies through CSR (Corporate Social Responsibility) programs.

5) Implementation of Digital Evaluation and Adaptive Diagnostics

Technology allows for the development of more efficient, accurate, and adaptive evaluation systems. Schools are advised to use digital evaluation platforms that can provide immediate feedback and student progress reports automatically (Nurhidayah, 2022). This makes it easier for teachers to develop learning strategies that are more targeted.

E. Synthesis of Findings with Theories and Concepts of Educational Management

The results of this study show the suitability and reinforcement of various theories and concepts in education management and the integration of technology in learning. Here is a synthesis of the field findings with a theoretical approach:

1. Open Systems Theory in Education

Owens and Valesky (2011) explained that schools as an open system must be able to interact with the outside environment and respond to the dynamics that occur. In the context of digitalization, technology is part of the external environment that must be integrated into the education system to remain relevant and responsive.

Al-Mubaarok High School has shown adaptability by adopting various digital platforms, building an online academic information system, and collaborating with outside parties in infrastructure development. This reflects the school's flexibility and ability to carry out its function as an open system.

2. Model TPACK (Technological Pedagogical Content Knowledge)

The TPACK model emphasizes the importance of integration between subject matter mastery, pedagogic approaches, and technology. Findings in the field show that teachers who master these three aspects are able to create more meaningful, efficient, and contextual learning—both online and face-to-face (Fadillah, 2021). Some teachers at Al-Mubaarok High School are able to combine technology such as Google Classroom with an interactive thematic teaching approach, while maintaining learning content according to Islamic values. This proves the direct relevance of the TPACK model in the context of technology-based Islamic education.

3. Transformational Leadership Theory

In Islamic education management, transformational leadership is essential to create cultural change towards a more modern system. Principals as leaders need to have a strong vision, be able to inspire, and support innovation from below. The Principal of Al-Mubaarok High School continues to strive to carry out a collaborative and participatory leadership style that reflects transformational principles, not only directing digitalization technically, but also building an atmosphere that supports innovation and continuous learning.

4. Blended Learning and Islamic E-learning Approach

The blended learning model, which is a combination of online and offline learning, is increasingly relevant in answering the needs of today's learning flexibility. Al-Mubaarok High School has implemented this approach gradually, while still paying attention to the characteristics of students and Islamic values (Hamid, 2021). Digital learning content is not only informative, but also normative and educational, for example through Islamic study videos, Qur'an learning applications, and online discussion activities about Islamic ethics. This reinforces the Islamic E-learning approach, which blends technological sophistication with spiritual depth.

CONCLUSION

This research thoroughly reveals that the use of technology in Islamic education management is not only a modern need, but has become an important foundation in forming a responsive, efficient, and highly competitive education system. In today's digital era, digital transformation in the world of Islamic education is not just an option, but an inevitability that must be responded to in a serious and targeted manner. The results of a field study at Al-Mubaarok High School, Jatiasih Bekasi, show that Islamic schools are able to adopt and develop various forms of technology in supporting the learning process and management of educational administration. The implementation of the Learning Management System (LMS), digitization of attendance, cloud-based value management, and the use of social media and video conferencing platforms are tangible evidence that technology has changed the face of Islamic education in a more adaptive and inclusive direction. This has a positive impact on improving the efficiency, transparency, and flexibility of the learning process, as well as expanding the range of interaction between teachers, students, and parents. However, this transformation process is not free from challenges. Among them are the limitations of technological infrastructure, low digital literacy among some teachers and students, resistance to changes in work culture, and the absence of a comprehensive strategic policy and digitalization roadmap. This condition shows the need for strategic measures that are not only technical, but also touch the structural, cultural, and spiritual dimensions of Islamic education. The solutions offered include

strengthening transformational leadership, gradual digital literacy training, the formation of school educational technology teams, and the development of an adaptive curriculum based on Islamic values. Synergy between the government, schools, the community, and the business world is needed to realize a sustainable technology-based Islamic education system. With a holistic and participatory approach, Islamic educational institutions can not only adapt to the changing times, but can also appear as pioneers in building an education system that unites Islamic values and technological advancement. The synergy between faith and innovation, between spirituality and digitalization, is the main force in creating a generation of Muslims who are intelligent, moral, and ready to face future challenges with dignity and competitiveness at the global level.

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