



Digitalization Islamic Education Curriculum and The Utilization of Technology in Learning

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ABSTRACT :

The digitalization of Islamic education brings significant changes in the learning methods of Islamic Religious Education (PAI), creating new opportunities and challenges in conveying religious values. The purpose of this study is to examine the influence of digitalization on the PAI curriculum, explore the potential of technology in improving the quality of learning, and analyze the challenges faced in its implementation. This study uses a qualitative approach with a descriptive type, collecting data through library studies involving literature, articles, and related regulations. The results of the study show that technology can enrich students' learning experiences with various digital platforms, such as mobile applications and social media, which facilitate access to PAI materials. However, challenges such as digital scarcity, weakening teacher training, and content validity are major obstacles to the implementation of digitalization. However, with careful teacher training and content selection, digitalization can answer the needs of the younger generation for more interactive and flexible learning. In conclusion, the PAI curriculum in the digital era must be more adaptive, integrate digital skills, and ensure the quality of content to remain in accordance with the true teachings of Islam.

Key words: *Digitalization; Curriculum; Islamic; Education; Technology.*

INTRODUCTION

Islamic education is crucial in establishing the character and morals of today's youth. The teaching of Islamic values and the instruction of religious knowledge are integral components of PAI, which is considered a crucial aspect of the national education system. The modern age and the rapid growth of technology and globalization have made it challenging for the traditional education system to remain up-to-date.

Digitalization, which is a key feature of the Fourth Industrial Revolution, has brought significant changes across various sectors, including the education field. The emergence of information and communication technologies has opened up the possibility of redesigning learning methods to enhance efficiency, adaptability, and relevance to digital learning styles. The strategic use of digitalization in Islamic religious education involves the provision of engaging, interactive, and easily accessible materials to enhance learning quality.

Islamic religious education faces several challenges in the process of digitalization. The lack of teacher training, inadequate digital access, and limited infrastructure are major barriers in many areas. Furthermore, technology can be incompatible with Islamic values, necessitating careful and ethical management (Haris 2023).

In contrast to other fields, digitalization enables Islamic education to become more accessible and inclusive of modern society. The static curriculum for Islamic religious education can now be formulated more dynamically through the use of learning apps, interactive videos, and online discussion forums. This not only simplifies the material for students, but also fosters collaboration among students (as well as between teachers and parents) in the education process.

In this article, we explore the potential of digitalization for Islamic Religious Education (PAI) to take it to a new level. Using technology to its full potential can help shape the future generations with strong Islamic character, while also providing them with an edge. The transformation represents an essential step towards preserving Islamic values and making them relevant in the modern world.

Methods

The research in this study is qualitative and descriptive. This approach was selected to investigate and analyze the impact of digitalization on Islamic Religious Education (PAI) and the use of technology in learning. Data was primarily obtained through library research, using books, scientific journals, articles, and official documents related to PAI curriculum and educational digitalization. The collected data consists of primary and secondary data. Primary data comprises information obtained from academic literature and case studies on digitalization in PAI learning, while secondary data encompasses educational regulations, reports on the use of digitalisation practices, and curriculum guidelines issued by official institutions.

During the data collection phase, it is necessary to use reliable sources such as online databases like Google Scholar, ResearchGate, and university library portals. The PAI curriculum relies on qualitative data, such as narratives or descriptions, to describe the opportunities, challenges, and impacts of digitalization. Using content analysis techniques, data is categorized according to primary themes, such as technology benefits in PAI learning, obstacles encountered during implementation and optimization strategies. The validity of data is established through source triangulation, which involves comparing information from different sources to produce a valid and comprehensive analysis. (Zulmi et al. 2024).

Result

Application of technology in Islamic religious education learning.

Innovative technology can enhance the learning experience of students through Islamic Religious Education (PAI) due to its many benefits. Various digital tools, including mobile apps and websites to enhance PAI learning, have been developed by many. This allows for the use of multimedia elements such as video, animation and audio to make PAI content (which is often text-based and has a focus on memorizing material) more dynamic. This helps students understand religious concepts in a more lively and relatable way. It makes previously dull learning materials easier for students to understand, especially for generations who are very familiar with technology. (A'la & Makhshun, 2022).

Technology that is already in use, such as the Quran learning application, has been established. These apps not only offer the Quran's text but also provide interpretations, translations and audio features designed to make reading it easier for students to understand. Such applications enable students to study Quranic verses at their own pace, without the need for physical books or in-person classes. Other features of these apps include the interactive exercises for memorizing short surahs and the online resource tajwid, which helps students read the Quran correctly. (Sodikin, *et.al.*, 2024).

Furthermore, social media and video-sharing platforms such as YouTube can be utilized as supplementary learning resources in Islamic Religious Education (PAI). These digital platforms offer a vast array of educational materials produced by scholars and Islamic educators who present religious teachings in a manner that is both comprehensible and contextually relevant to contemporary learners. Such audiovisual resources provide valuable alternatives for students who benefit from visual modes of learning, particularly when exploring complex subjects such as *fiqh*, Islamic history, or the narratives of the prophets. Hence, the implementation of PAI instruction is no longer confined to conventional pedagogical methods but can be enhanced through diverse, flexible, and interactive learning media that support a more engaging and meaningful educational experience.

In addition to improving the quality of learning materials, the integration of technology also enhances student engagement in the learning process. For instance, the use of interactive quizzes and educational games based on digital applications can increase students' motivation to learn. Technology further enables teachers to assign tasks or administer assessments online, thereby facilitating more objective and transparent evaluation processes. Through online learning

platforms, educators can more easily monitor individual student progress, provide timely feedback, and foster a more personalized learning environment. This approach is particularly relevant in the contemporary era, where students are increasingly immersed in the use of digital devices in their daily lives. (Akhyar et al. 2024).

However, despite the numerous benefits offered by technology, several challenges must be taken into consideration in its implementation. One of the primary concerns is the digital divide, particularly in regions that lack adequate internet infrastructure. Moreover, not all teachers possess the necessary technical skills to effectively integrate technology into the learning process. Therefore, it is essential for educational institutions to provide professional development and training programs that enable teachers to optimize the use of technology in Islamic Religious Education (PAI). With appropriate support and capacity building, the integration of technology in Islamic education can be implemented more effectively, thereby fostering a more meaningful and enhanced learning experience for students.

Challenges in Implementing the Digitalization of Islamic Education

Although digitalization in Islamic education offers various opportunities, its practical implementation still faces several significant challenges that require careful consideration. One of the major challenges lies in the limitation of technological infrastructure, particularly in regions where internet access remains inadequate. In many rural or remote areas, unstable or limited internet connectivity continues to be a major obstacle, rendering online learning less effective. Without the support of reliable internet access and sufficient technological resources, the integration of digital technology into Islamic Religious Education (PAI) becomes hindered and difficult to implement equitably across different educational contexts. (Khoirunnisa, *et.al.*, 2024).

In addition, the lack of technological training and digital competence among teachers also poses a significant challenge. Many Islamic Religious Education (PAI) teachers remain accustomed to conventional teaching methods, resulting in limited ability to integrate technology effectively into the learning process. This lack of technical proficiency may lead to suboptimal implementation of technology in the classroom and hinder the development of more interactive and modern teaching approaches. Therefore, providing adequate training and enhancing teachers' technological competencies should be prioritized to ensure that they are able to utilize various digital tools effectively in supporting the teaching and learning process. (Priyanto 2020).

Another emerging challenge concerns the quality and validity of Islamic educational content available in digital spaces. Although the internet provides abundant religious learning materials, not all of them originate from credible and authoritative sources. This situation poses a

significant risk of disseminating inaccurate or misleading information that may deviate from authentic Islamic teachings. In the context of Islamic Religious Education (PAI), it is crucial to ensure that the materials delivered to students are derived from reliable and recognized religious authorities. Therefore, schools and educational administrators must exercise careful discernment in selecting appropriate platforms and instructional content to be integrated into the learning process. (Wahyuni et al. 2024).

Moreover, digitalization also presents challenges related to the lack of direct interaction between teachers and students. Learning through digital platforms tends to reduce opportunities for face-to-face engagement, which is particularly valuable in religious education. Certain aspects of Islamic Religious Education (PAI), such as the understanding of moral conduct (*akhlak*), ethical values, and character development, often require direct discussion and personal guidance from teachers. The absence of such interpersonal interaction may limit students' depth of understanding of religious teachings if it is not complemented by sufficient face-to-face learning experiences.

Social and economic disparities may further exacerbate the challenges associated with the digitalization of Islamic education. Students from economically disadvantaged families often lack adequate access to technological devices such as computers or smartphones that are essential for participating in online learning. This situation contributes to unequal educational opportunities and widens the learning gap between different socio-economic groups. Therefore, it is essential to ensure that all students, regardless of their economic background, have equitable access to digital learning resources and are provided with opportunities to receive a high-quality education.

The Role of Teachers in the Digitalization of Islamic Religious Education (PAI)

Teachers play a pivotal role in the digitalization of education, particularly within the context of Islamic Religious Education (PAI). As the primary facilitators in the classroom, teachers are not only responsible for delivering instruction but also for guiding students in the effective and responsible use of technology. In the digital era, PAI teachers must be able to integrate technological tools with existing teaching methods, thereby making learning materials more interactive and engaging. Consequently, teachers need to possess adequate skills and knowledge to utilize digital tools—such as educational applications, video platforms, and social media—in delivering PAI content in ways that are both relevant and easily comprehensible for students. (Nudin 2020).

One of the critical roles of teachers in the digitalization of PAI is to act as guides in selecting and utilizing appropriate content. Given the vast amount of religious information available online, teachers must be able to critically evaluate and choose sources that are authentic

and consistent with correct Islamic teachings. With increased access to information, students are often exposed to unverified or potentially misleading materials. Therefore, it is essential for teachers to ensure that the content used is derived from credible and academically accountable sources, and that it aligns with the curriculum implemented in schools. (Yasmansyah & Zakir, 2022).

PAI teachers also serve as motivators and mentors for students within the digital learning process. Through digital platforms and educational applications, teachers not only deliver instructional content but also encourage and inspire students to engage more actively in their learning. In this context, teachers are required to create a learning environment that supports the productive use of technology while providing moral and spiritual guidance through digital media. They can offer immediate feedback via educational applications or online discussion forums, ensuring that students feel supported in both their academic and spiritual development. (Neliwati, *et.al.*, 2024).

Furthermore, teachers act as a bridge between the digital and real worlds. As educators, they are responsible not only for teaching students how to access and utilize technology but also for helping them understand both the positive and negative impacts of technology in daily life. Within the context of Islamic Religious Education (PAI), teachers can instruct students on digital ethics, including appropriate online behavior, respect for others' privacy, and the productive use of technology in ways consistent with Islamic principles. They can also guide students in understanding how technology can serve as a tool to enhance religious knowledge rather than merely as a source of entertainment or irrelevant information.

PAI teachers also bear the responsibility of continuously updating their knowledge and skills in line with technological developments. The digitalization of Islamic education requires teachers who are not only proficient in religious instruction but also knowledgeable about the latest educational technologies that can improve learning quality. Therefore, teachers need to participate in training programs, workshops, and seminars on educational technology to develop and adapt to ongoing changes. In doing so, they can guide students to gain a deeper understanding of Islamic teachings while effectively leveraging technology to enrich their learning experience in the digital era.

The Future of the Islamic Education Curriculum (PAI) in the Digital Era

The future of the Islamic Religious Education (PAI) curriculum in the digital era is expected to undergo significant transformations that address the challenges of the times and meet the needs of a generation increasingly connected to technology. Amid rapid advancements

in information technology, the PAI curriculum must be adaptive and innovative to remain relevant to contemporary developments. One of the most notable changes is the integration of technology into every aspect of the learning process, from instructional methods to the learning materials employed. Technology not only has the potential to enrich the learning experience but also opens new opportunities for students to understand and apply religious teachings in their daily lives. (Wahyuni et al. 2024).

The future PAI curriculum must be capable of integrating both traditional and modern approaches by leveraging various digital platforms, such as e-learning systems, mobile applications, and social media. The use of digital learning tools, including digital Qur'an applications, online *tafsir*, and religious podcasts, is expected to become increasingly prevalent. These tools enable students to access PAI learning materials anytime and anywhere. Technology-based learning systems allow for more flexible instruction that can be tailored to the needs and learning pace of individual students, while also expanding opportunities for in-depth religious study through reliable and authoritative sources.

An essential aspect of developing the PAI curriculum in the digital era is the emphasis on digital literacy in alignment with Islamic teachings. Beyond studying religious texts, students must also gain an understanding of ethical and moral principles in technology use. This includes teaching them to use the internet responsibly, recognize ethical challenges in the digital environment, and utilize social media for positive purposes, such as disseminating authentic and peaceful Islamic teachings. The future PAI curriculum should incorporate content that educates students about their social and moral responsibilities in the digital sphere, consistent with the values embedded in Islamic teachings. (Yasmansyah and Zakir 2022).

Furthermore, a digitally-based PAI curriculum must accommodate diverse student learning styles. Each individual processes information differently, and technology can facilitate a more personalized learning experience. For instance, visually-oriented students may benefit from educational videos or infographics, while those who prefer text-based learning can utilize e-books or digital articles. By employing a more varied and interactive approach, students can engage with PAI content in a more stimulating manner, enhancing their ability to understand and apply religious teachings in real-life contexts.

On the other hand, a significant challenge lies in ensuring the quality and accuracy of digital content used in PAI learning. The future PAI curriculum must provide clear guidelines for selecting and utilizing credible and authoritative digital sources. Religious education must continue to adhere to Islamic principles as taught by scholars and recognized authorities, while

avoiding the dissemination of inaccurate or misleading information. Therefore, in the development of a digitally-based PAI curriculum, collaboration among educational administrators, teachers, and religious experts is essential to ensure that the content delivered aligns with authentic Islamic teachings.

Overall, the future of the Islamic Religious Education (PAI) curriculum in the digital era promises a more comprehensive, technology-driven, and relevant approach to meeting the needs of today's youth. This curriculum is designed not only to develop students' cognitive abilities but also to equip them with the social and moral skills necessary for navigating the digital world. Consequently, PAI in the future will go beyond traditional religious instruction, serving as a platform for nurturing digitally literate young individuals who are knowledgeable in Islam and prepared to face global challenges with moderate and peaceful Islamic values.

The digital era presents significant potential for integrating technological advancements with effective and relevant religious learning. In this context, the PAI curriculum must adopt technology to provide a more interactive, flexible, and engaging learning experience. By utilizing digital platforms such as e-learning systems, mobile applications, and social media, students can access PAI materials anytime and anywhere, enabling deeper religious study without spatial or temporal limitations. This approach is particularly crucial for reaching a generation that is increasingly connected to technology in their daily lives. Moreover, technology allows the PAI curriculum to cater to diverse learning styles. For example, visually-oriented students can benefit from educational videos or infographics, while those who prefer text-based learning can access e-books or digital articles. By employing this flexible and varied approach, students can engage with Islamic teachings in a more enjoyable and stimulating manner, thereby enhancing their understanding and application of religious principles.

In addition, technology enables the PAI curriculum to become more diverse and adaptable to various student learning styles. For instance, students who prefer visual learning can benefit from educational videos or infographics, whereas those who are more comfortable with text-based learning can utilize e-books or digital articles. Through this flexible and dynamic approach, students are able to engage with the learning process in a more enjoyable and less monotonous way, thereby enhancing their understanding and internalization of Islamic teachings.

Technology-based learning also facilitates more personalized instruction, allowing teachers to provide greater attention to each student according to their individual needs.

However, alongside the conveniences offered by technology, a significant challenge lies in ensuring the quality and validity of digital content available for learning.

Although a wealth of religious information is easily accessible, not all sources are reliable or credible. Therefore, the future PAI curriculum must ensure that the materials used originate from authentic sources recognized by religious authorities. Teachers and educational administrators should be actively involved in selecting digital content to guarantee that the teachings conveyed align with authentic Islamic principles and do not lead to misconceptions.

In addition, it is essential for the future PAI curriculum to incorporate digital literacy education. In the digital era, students not only need to master religious content but also develop an understanding of ethical and moral principles in technology use. PAI teachers should guide students on the prudent use of the internet and the application of Islamic values in the virtual environment. This includes teaching proper conduct on social media, recognizing and avoiding misinformation, and disseminating beneficial information in accordance with peaceful and moderate Islamic teachings. Consequently, religious education extends beyond traditional textual learning to also cultivate students as responsible and ethically aware users of technology.

The PAI curriculum in the digital era holds significant potential to become more inclusive, interactive, and aligned with contemporary needs. The integration of technology into Islamic religious education facilitates more engaging learning experiences that are accessible to students across diverse regions. However, to fully realize this potential, the development of the PAI curriculum must prioritize content quality, teacher training, and digital literacy instruction. This ensures that students not only gain a deep understanding of Islamic teachings but also develop the capacity to use technology responsibly. In this way, the future PAI curriculum can foster a generation of young people who are knowledgeable, morally upright, and equipped to navigate the digital world guided by moderate Islamic values.

The Role of Technology in Developing Student Competencies

The use of technology within the “Kurikulum Merdeka” expands opportunities for students to develop essential 21st-century skills. Technology facilitates collaborative learning through platforms such as Google Classroom and supports problem-based learning approaches that enhance critical and creative thinking abilities. Furthermore, technology can increase student motivation and promote active engagement in the learning process, as exemplified by the Community of Inquiry model (Garrison dan Anderson 2003).

The role of educational technology in the implementation of the “Kurikulum Merdeka” can address various learning challenges, such as difficulties in understanding abstract concepts,

reasoning about historical events, limited experiential exposure, and challenges in observing extremely small or large objects. Additionally, technology supports the comprehension of concepts that require higher-order thinking skills (HOTS) (Immanuddin & Suryanata, 2017).

These challenges pose obstacles to the “Merdeka Belajar” program and require effective solutions to create more efficient and impactful learning experiences. Educational technology offers various strategies to address these challenges and accelerate the achievement of learning objectives. The contributions of technology in education include the following:

- 1) **Enhancing the quality of education** by enabling educators to manage their time more efficiently, accelerating the learning process, and reducing reliance on traditional lecture methods, thereby promoting more interactive student engagement.
- 2) **Providing comfort and support for students** to foster their individual interests, talents, and potential while maintaining appropriate teacher supervision.
- 3) **Designing systematic and scientifically grounded learning programs** and developing instructional materials based on established academic principles.
- 4) **Improving teacher competencies** by broadening their practical knowledge and understanding of effective teaching strategies.
- 5) **Prioritizing the overall improvement of educational quality** to ensure a comprehensive enhancement of the learning experience.

This study indicates that educational technology plays a significant role in supporting the implementation of the Merdeka Curriculum. The use of online learning applications, Learning Management Systems (LMS), and digital collaboration tools such as Google Classroom and Zoom positively impacts accessibility, interactivity, and student engagement. Technology enables autonomous and personalized learning, aligning with the principles of inclusivity and responsiveness embedded in the curriculum. The study highlights the crucial role of technology not merely as a supporting tool but as a strategic component that facilitates flexible, project-based learning tailored to individual student needs, in accordance with the principles of the current Merdeka Curriculum. This perspective is also consistent with the Connectivism theory (Siemens, 2005), which emphasizes learning as a process of connecting specialized nodes of information across digital networks. However, challenges remain in the implementation of technology, such as limited infrastructure, low digital literacy, and insufficient teacher training. These factors hinder the optimal utilization of technology, particularly in regions with restricted internet access.

1. Strategies for Optimizing Educational Technology

According to Prensky (2001), technology can enhance student engagement through compelling digital media. The strategies required for optimal utilization include:

- a. **Improving technological infrastructure** across all regions of Indonesia.
- b. **Providing intensive teacher training** to develop digital skills and technology-based pedagogical competencies (Mishra & Koehler, 2006).
- c. **Fostering collaboration** among government, educational institutions, and the private sector to support the development of technology-based learning tools.

2. Relevance and Impact of Technology

Educational technology has a positive impact on student motivation and autonomy, as highlighted by Garrison & Anderson (2003) in the Community of Inquiry Model. Furthermore, the integration of technology can enhance critical thinking, communication, and collaboration skills, which are key objectives of the Merdeka Curriculum. The use of artificial intelligence, the use of digital media, and the blended learning approach can enrich the learning experience while increasing the effectiveness of teaching (Suhendi, 2024).

3. Impact on Student Learning Experiences

The use of technology in the Merdeka Curriculum positively affects various aspects of student learning, including:

- a. **Enhancing Independence:** Students become more autonomous in exploring learning materials through digital resources.
- b. **Promoting 21st-Century Skills:** Technology supports the development of critical thinking, communication, collaboration, and creativity.
- c. **Increasing Learning Motivation:** Interactive digital media make learning more engaging and enjoyable for students.

Conclusion

Based on the discussion above, it can be concluded that the future of the Islamic Religious Education (PAI) curriculum in the digital era holds significant potential to enhance the quality of learning through the use of flexible and interactive technologies, such as e-learning platforms and mobile applications, which allow students to access educational materials anytime and anywhere. However, the primary challenges lie in selecting authentic and valid content, as well as implementing digital literacy to ensure that students not only gain religious knowledge but also

understand the ethical use of technology. With an adaptive approach, a digitally-based PAI curriculum can cultivate a generation of young people who are digitally competent, morally upright, and prepared to face global challenges while upholding moderate Islamic values.

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