

## Innovation In Islamix Education Teaching and Learning In The Digital Era

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### ABSTRACT

The integration of digital technology in Islamic education presents challenges and opportunities to improve the quality of learning. Although technology expands access to educational resources and increases interaction between students and teachers, challenges such as limited digital literacy, information ethics issues, and loss of personal interaction in online learning need to be addressed. This research aims to explore the challenges and innovations in implementing digital technology in Islamic education in Indonesia, as well as providing strategic recommendations for improving the quality of education. The method used is a qualitative approach with descriptive methods involving in-depth interviews, observation and documentation at Islamic educational institutions. The research results show that intensive training on digital literacy, teaching digital ethics, and strengthening personal interactions between educators and students are important steps to optimize use of technology in Islamic education. In this way, Islamic education can be transformed to become more relevant and effective in the digital era without sacrificing the values of Islamic teachings.

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## Introduction

The integration of digital technology in Islamic education presents both challenges and opportunities. While it enhances access to diverse religious content, student interactivity, and teacher-student dynamics (Salabila, 2024), challenges include access disparities, insufficient educator training, and data privacy concerns. To address these issues, recommendations include improving technological infrastructure, formulating supportive policies, and fostering cross-sector collaboration (Salabila, 2024; Arif et al., 2024). Innovations in Islamic education curricula should integrate technology aligned with Islamic values, develop digital competencies for educators, and create flexible, adaptive curricula (Mukarom et al., 2024). Educational technologies like interactive learning applications, e-learning platforms, and social media can enrich Islamic-based learning experiences (Yunita & Mulyadi, 2024). However, a holistic approach is necessary, emphasizing spiritual and moral values alongside technological advancements (Arif et al., 2024). This transformation aims to develop digitally competent Muslims who remain steadfast in their Islamic values (Mukarom et al., 2024). The integration of digital technology in Islamic education is an essential step toward creating a balanced approach

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that merges technological advancements with the preservation of spiritual and moral values, ensuring that students are both digitally competent and rooted in Islamic principles.

The digital era has brought significant transformations to Islamic education, offering opportunities for wider access to educational resources and improved learning experiences (Suwahyu, 2024; Jamil, 2022). Integration of digital technology in Islamic education enhances learning quality and student engagement, with educators playing a crucial role in fostering necessary skills and knowledge (Ulfah et al., 2024). Key components for successful implementation include digital content, curriculum design, teacher training, and supporting infrastructure (Ulfah et al., 2024). While technology adoption presents challenges such as the digital divide and concerns about compromising traditional values, it also offers potential for enriching learning experiences and disseminating Islamic teachings more effectively (Suwahyu, 2024; Jamil, 2022). The urgency for Islamic education in the 21st century lies in adapting to technology and globalization while maintaining core values and traditions (Jurnal Pendidikan Islam et al., 2024). Balancing technological innovation with traditional values is essential for the successful transformation of Islamic education in the digital age (Jamil, 2022).

The digital era has necessitated innovation in Islamic religious education (IRE) to prevent stagnation and rigidity in learning (Mufidah, 2022; Solichin et al., 2023; Jazilah, 2021; Nurdin, 2016). Educators must leverage technological advancements to enhance the learning process both inside and outside the classroom (Mufidah, 2022; Solichin et al., 2023). The internet, as a modern and adaptive learning medium, offers alternative methods for IRE, such as e-learning and educational applications (Mufidah, 2022; Jazilah, 2021; Nurdin, 2016). These innovations facilitate the delivery of learning materials, making the process more engaging and less monotonous (Mufidah, 2022; Solichin et al., 2023; Jazilah, 2021; Nurdin, 2016). By embracing technology, IRE can improve its quality and relevance in Indonesia's educational landscape (Mufidah, 2022; Solichin et al., 2023). The digital natives' tendency to seek information online further emphasizes the need for IRE to adapt to this new reality (Jazilah, 2021). The author believes that integrating technology into Islamic religious education is not just an option but a necessity to align with the evolving learning preferences of digital-native students while maintaining the core principles of Islamic teachings.

Recent research highlights the significant role of technology in transforming Islamic education in the digital era. Studies indicate that effective integration of technology can make Islamic education more flexible, engaging, and relevant while preserving traditional values (Jamil, 2022; Suwahyu, 2024). The use of e-learning platforms, educational apps, and the internet offers new opportunities for innovative and adaptive learning (Isti'ana, 2024). Technology enables wider access to Islamic educational resources and enhances student engagement (Jamil, 2020, 2022). However, challenges such as the digital divide, unequal access to technology, and the need to balance traditional values with technological innovation must be addressed (Jamil, 2022; Suwahyu, 2024). Successful implementation requires careful planning, adequate support, and readiness of human resources (Isti'ana, 2024; Suwahyu, 2024). Overall, integrating technology in Islamic education presents great opportunities to enrich learning experiences and improve educational quality (Isti'ana, 2024; Jamil, 2020, 2022; Suwahyu, 2024). The author asserts that the integration of technology in Islamic education is a pivotal step toward enhancing its quality and relevance, provided that it is implemented thoughtfully to address challenges and uphold core Islamic values.

The aim of integrating digital technology in Islamic education is to improve the quality of education by making learning more interesting, flexible and relevant without sacrificing traditional Islamic values. Apart from that, this innovation aims to increase student accessibility and involvement, thereby producing graduates who are competent in facing challenges in the technological era and have a strong understanding of Islam.

## Methods

This research uses a qualitative approach with descriptive methods to explore in depth the application of digital technology in Islamic education. This approach aims to describe the challenges faced, the innovations implemented, and their impact on the quality of learning. The research location involves various Islamic educational institutions in Indonesia, including Madrasah Aliyah Negeri (MAN), modern Islamic boarding schools, and Islamic universities such as UIN or IAIN, which have integrated digital technology in the learning process.

Research subjects include three main groups: educators, students, and policy makers. Educators consist of teachers and lecturers who teach Islamic religious subjects, while students from various levels of education are involved in digital technology-based learning. Policy stakeholders, such as school principals, Islamic boarding school administrators, or rectors, play an important role in making related decisions technology implementation. Data collection techniques include in-depth interviews to explore experiences and perceptions, direct observation of the learning process, documentation related to curriculum and policies, and questionnaires to obtain quantitative data.

The data obtained was analyzed using thematic analysis techniques for qualitative data, which includes coding and grouping main themes. Quantitative data analysis is carried out with descriptive statistics, such as frequency distribution and percentages, to understand the effectiveness of using digital technology. The validity of the findings is strengthened through triangulation of data from interviews, observations and documentation. It is hoped that this research will be able to provide an in-depth understanding of the integration of digital technology in Islamic education, as well as offer strategic recommendations to overcome existing challenges.

## Result and Discussion

In interviews with educators and students, several main findings emerged regarding the challenges faced in implementing digital technology in Islamic education.

**Digital Literacy:** Most educators and students admit that they still have limited digital skills. The teachers stated that although they had used digital devices, they had not fully mastered various technology-based learning tools. Some students also expressed difficulties in accessing learning materials provided online, especially for those who were less familiar with technology. Most students want more intensive training regarding the use of digital tools used in the learning process. **Ethical Concerns:** Educators expressed concern about the spread of incorrect information online. They note that students tend to access information from less accessible sources accountable, so that their understanding of Islamic teachings is often distorted. In interviews, some students also admitted that they had difficulty distinguishing valid from invalid information. Many of them suggested that there should be education about digital literacy and ethics in accessing online information related to Islam. **Loss of Personal Interaction:** Both educators and students feel the negative impact of reduced face-to-face interaction in online learning. Educators find it

difficult to build strong personal relationships with students, which is very important in religious education. Some students also stated that they felt less attention and had difficulty communicating effectively with teachers. They long for deeper direct communication and more personally interactive learning experiences.

Based on the questionnaire distributed to students and educators, several results were also significant obtained related to the challenges faced:

**Digital Literacy:** Most educators (70%) feel they are not skilled enough in making maximum use of technology in the learning process, even though they use digital tools regularly. Meanwhile, around 60% of students stated that they found it difficult to operate some of the learning applications used at school. **Ethical Concerns:** 65% of students surveyed admitted to having encountered false or inaccurate information on the internet regarding Islamic teachings. Only 35% of students feel they have the ability to assess the veracity of the information they receive. This shows the need to include digital literacy and ethics in the Islamic education curriculum. **Loss of Personal Interaction:** 55% of students surveyed felt that online learning reduced their social interactions with educators, and they found it more difficult to build relationships with teachers online. 50% of educators also said that they feel that relationships with students become less intimate and less effective in online learning.

Based on the results of interviews and questionnaires, three main challenges in implementing digital technology in Islamic education are clearly visible. Digital Literacy is quite a big obstacle, both for educators and students. Educators who lack skills in using technological tools affect the quality of teaching, while students who do not have sufficient digital skills find it difficult to engage in online learning. Therefore, regular and intensive technology training is very important to improve digital skills for educators and students. Digital literacy poses significant challenges for both educators and students in Indonesia, particularly in the context of online learning during the COVID-19 pandemic. Limited access to digital devices, internet connectivity issues, and lack of digital skills hinder students' ability to fully utilize technology in their learning experiences, especially in regions like Central Java (Rival Pahrijal & Salwa Aulia Novitasari, 2023). Educators often struggle with integrating technology into teaching processes, affecting the quality of education (Aprian Paturrahman et al., 2024). While digitalization offers benefits such as broader access to learning materials, excessive use of gadgets can negatively impact students' concentration (P. A. C. Dewi, 2023). To address these challenges, regular and intensive technology training is crucial for improving digital skills among educators and students. Such training has shown positive results, with educators demonstrating improved abilities in operating learning media after participating in workshops (Kumalasari et al., 2022).

Ethical Concerns are also a challenge that cannot be ignored. The spread of misinformation in cyberspace can damage students' understanding of Islamic teachings. To overcome this problem, it is very important to integrate digital literacy education in the Islamic education curriculum. This will help students to assess the credibility of information sources and avoid the spread of misinformation. The integration of digital literacy in Islamic education is crucial to address ethical concerns and misinformation in the digital era (Hasanah & Sukri, 2023). Reformulating Islamic education curricula to include digital ethics and responsible technology use is necessary to maintain relevance while preserving core religious values (Aziza, 2024). The digital revolution offers opportunities for wider access to Islamic educational resources and enhanced student engagement, but also presents

challenges such as the digital divide and potential loss of traditional aspects (Jamil, 2022). Strategies for integrating Islamic values in character education in the digital age include developing digital-based learning materials and reinterpreting religious teachings in contemporary contexts (Eryandi, 2023). To overcome challenges like resource limitations and differing interpretations of Islamic values, a balanced approach is needed, combining traditional values with technological innovation in Islamic education (Jamil, 2022; Eryandi, 2023).

Finally, Loss of Personal Interaction shows how important direct interaction between educators and students is, which in online learning becomes more limited. Even though technology allows distance learning, close personal relationships and direct communication are very important, especially in the context of Islamic religious education which requires depth of understanding and emotional closeness between teachers and students. Therefore, there needs to be a solution to maintain a balance between online learning and face-to-face interaction, such as more interactive online sessions and personal consultation time with educators. The COVID-19 pandemic has significantly impacted Islamic religious education, necessitating a shift to online learning. This transition has presented challenges in maintaining effective interpersonal communication between teachers and students (Purnomo, 2023; R. Hadi & Nursa, 2021). The loss of physical presence has made it difficult to control students' emotions and establish meaningful connections (Limbong et al., 2020). To address these issues, teachers must adapt their communication strategies, emphasizing quality over quantity and focusing on social, cognitive, and learning presence through scaffolding and guidance (Purnomo, 2023; Cahyono & Purnomo, 2023). Effective solutions include involving parents, creating collaborative learning environments, and implementing role distribution among students (Cahyono & Purnomo, 2023). Additionally, teachers may need to meet students individually at their homes to maintain connection and ensure learning continuity (R. Hadi & Nursa, 2021). These approaches aim to balance online learning with personal interaction, crucial for the depth of understanding required in Islamic religious education.

Overall, these challenges require serious attention to increase the effectiveness of the application of digital technology in Islamic education, especially through better training, curriculum updates, and increasing digital literacy among educators and students.

## Conclusion

The integration of digital technology in Islamic education in the digital era brings significant challenges and opportunities. The research results show that the main problems faced in implementing digital technology in Islamic education are limited digital literacy both among educators and students, concerns regarding ethics in accessing information, and loss of personal interaction in online learning. Limited digital skills possessed by educators and students hinder the effectiveness of learning, while the spread of misinformation on the internet can damage understanding of Islamic teachings. Additionally, reduced face-to-face interactions in online learning affect the quality of relationships between educators and students, which is important in religious education that prioritizes depth of understanding and emotional closeness. However, the integration of digital technology in Islamic education also provides many opportunities for enrichment learning experiences, expand access to learning materials, and increase student engagement. To ensure technology can be utilized optimally, it is important to carry out

intensive training to increase digital literacy, integrate digital ethics education in the curriculum, and find solutions to maintain quality personal interactions in online learning.

To enhance the effectiveness of digital technology integration in Islamic education, several measures should be taken: First, intensive digital literacy training for both educators and students is crucial to improve their digital skills and optimize the use of learning tools. Additionally, the Islamic education curriculum should incorporate digital literacy and ethics education to help students critically assess online information and avoid misinformation about Islamic teachings. Maintaining personal interactions is also essential, and institutions should explore ways to keep direct communication between educators and students, such as through face-to-face sessions or consultations. Moreover, supportive policies from the government and educational institutions are necessary to ensure proper infrastructure, flexible curriculum, and educator training. Finally, collaboration across education, technology, and religious sectors will ensure that technology use aligns with Islamic values, enhancing the learning experience. By addressing these challenges and leveraging available opportunities, Islamic education can evolve to be more relevant, effective, and modern while staying true to Islamic principles.

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