



Information System Integration in Islamic Education: Efforts to Increase Learning Effectiveness in the Digital Age

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Abstract

The development of information and communication technology has had a significant impact on the field of education, including Islamic Religious Education (PAI). One way to utilize this is by integrating information systems into the teaching and learning process. This article aims to analyze how information systems can be optimally utilized in PAI to improve the effectiveness of the learning process and how Islamic values are applied in the use of this technology. This study used a literature review method with a qualitative approach. The results show that the use of Learning Management Systems (LMS), digital learning applications, and social media can increase access to PAI materials and shape students' character digitally. However, their use must be accompanied by Islamic values such as trustworthiness, honesty, digital ethics, and spiritual awareness. Therefore, PAI teachers need to act as facilitators and character educators in the digital environment.

Keywords:.. Islamic Education, Information Systems, Educational Technology, Digital Ethics, Digital Era.

Introduction

Islamic Religious Education (PAI), previously known for its traditional methods of lectures and memorization, is now transforming into an information systems-based learning approach. This is driven by the need for broader and more interactive access to students, especially in the digital age, which prioritizes efficiency and accessibility. However, the use of information systems also faces ethical and moral challenges. The wide openness of information available online can pose risks if not carefully selected and understood based on Islamic values.

Islamic educational institutions play a crucial role in shaping students' character and spiritual values. However, significant challenges arise when the teaching methods used do not fully meet the needs of a digital generation that is more active, critical, and familiar with visual and multimedia interactions. The limitations of conventional teaching methods result in students losing enthusiasm and often neglecting the importance of Islamic Religious Education (PAI) materials in their daily lives. This is a key factor driving the need to develop more relevant, meaningful, and digitally connected Islamic Religious Education (PAI) learning resources.

The use of technology in religious education encompasses more than just digital tools in the learning process; it also involves a shift in mindset in developing teaching materials that connect Islamic values to students' life situations. Contextual Islamic Religious Education requires the delivery of materials that can be connected to students' real-life experiences and surrounding social challenges, so that Islamic values can be understood comprehensively and practically. Digital technology offers a variety of media and platforms that can be used to design engaging, interactive learning methods that are tailored to the needs and characteristics of today's students.

The integration of digital technology into Islamic Religious Education (PAI) learning can be achieved through various methods, such as implementing a Learning Management System (LMS), educational videos, mobile apps, interactive educational materials, and utilizing social media as a platform for religious discussions. These strategies not only increase student interest and active engagement but also enable collaborative and contextual learning. For example, through digital projects exploring contemporary Islamic issues, students can be trained to think critically about current issues, express ideas creatively using digital media, interact efficiently with various parties, and collaborate in multicultural and interschool groups.

Technology integration also opens up opportunities for innovation in Islamic Religious Education (PAI) learning evaluation methods. With digital platforms, teachers can create interactive quizzes, online exams, or project-based assignments that enable students to creatively apply their religious understanding. This technology-based evaluation also provides immediate feedback to students, allowing them to quickly and accurately assess their learning outcomes (Yahya, 2022).

Several studies relevant to this research include those conducted by (Tomi, 2024), which showed that the use of digital media, such as videos and interactive applications, can increase students' interest and understanding of religious teachings. Students who learn with digital media show a significant increase in understanding compared to conventional methods. (Mansyur et al., 2025) found that integrating technology into learning is a strategic step in improving the effectiveness and quality of education in the digital age. Collaboration between academics, teachers, and technology practitioners is a key factor in creating adaptive and effective learning innovations. (Aziz & Zakir, 2022) researched research results showing that advances in digital technology have brought about significant transformations in education, introducing more interactive, collaborative learning models that are tailored to students' needs. The integration of technologies such as computers, the internet, and educational applications allows teachers to present material dynamically, while students can access various digital

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learning resources and develop independent learning skills. The use of digital technology can increase student engagement and motivation, with learning models such as flipped classrooms, blended learning, and hybrid learning offering flexibility and effectiveness.

Most previous research has focused on the integration of educational technology on student motivation and learning outcomes. However, research exploring the integration of Islamic education to enhance effective learning to assist teachers in determining more innovative learning methods and media and presenting material in a more engaging manner is still very limited. Based on this description, the researchers conducted a study entitled "Integration of Islamic Educational Technology in Enhancing Effective Learning in Elementary Schools."

Research Methods

This research uses a descriptive qualitative method with a systems study approach (library research). Information is obtained from scientific journals, books, articles, and other references discussing the Islamic religious system, systems technology, and information systems. Analysis is conducted by studying, reviewing, and drawing conclusions from the information to understand the relationship between Islamic Religious Education (PAI) and information systems in the context of contemporary learning. The research process is carried out by identifying, critically analyzing, and synthesizing various perspectives and findings from previous studies, to gain a comprehensive understanding of the benefits, challenges, and impacts of using digital technology in developing Islamic Religious Education (PAI) teaching materials. This approach is expected to provide significant theoretical and practical contributions in supporting the efficient use of technology in Islamic education environments.

The data collection technique in this study was a literature review. The data in this study came from research results that had been conducted and published in national online journals and scientific proceedings. The researcher collected journal articles in the Google Scholar database with the keywords "integration of Islamic educational technology," "effective learning," and "elementary schools." The data sources came from scientific journals and proceedings, which are open access and must be accessible in full text. The scientific journals and proceedings used as data are not literature reviews. The publication years of the journals and proceedings, between 2022 and 2024, contained articles on the integration of Islamic educational technology to improve effective learning in elementary schools. From the various articles, the researcher selected 10 articles closely related to the keywords used. The next step, the researcher grouped the articles on the integration of digital technology in Islamic education related to effective learning and learning outcomes in general. The article metadata is tabulated in a table that includes the author's name and year of publication, the journal name, the article title, the type of research, and the results of the study. The researcher then conducts an in-depth review and analysis of the article, particularly regarding the research results presented in the discussion and conclusion sections.

Results And Discussion

The Role of Information Technology in Islamic Religious Education

Advances in digital technology have significantly transformed the way students learn, including in Islamic Religious Education (PAI). The use of digital devices, such as laptops, tablets, and smartphones, as well as online educational platforms, allows students to access learning materials anytime and anywhere. Learning patterns that were previously passive and dependent on teachers have now transformed into more active, creative, and independent learning.

In the context of Islamic Religious Education (PAI), this change allows students to explore Islamic issues through various platforms such as YouTube, Islamic podcasts, interactive Quran apps, and

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online discussion forums that address social and moral issues. This change not only enhances students' understanding but also encourages them to develop a reflective spiritual awareness based on real personal experiences.

The implementation of Islamic Religious Education teaching materials has a clear positive impact on teaching effectiveness. Literature research and analysis of various educational methods show that the use of technology can increase student active engagement in the learning process. The interactivity offered by digital media creates a more engaging learning experience, providing opportunities for students to explore Islamic Religious Education materials individually and in groups.

Digital Media Use and Educational Accessibility

The use of digital learning resources in Islamic Religious Education (PAI) has significantly improved the quality and accessibility of learning materials. Various digital media, such as learning videos, interactive animations, Islamic educational apps, and online learning platforms, offer students the opportunity to access Islamic materials in a more varied and engaging way than conventional learning resources, which typically consist of printed text. This variety of media formats not only supports content delivery but also accommodates various student learning methods, particularly those who prefer visual and audio learning.

The primary benefit of using digital technology in Islamic Religious Education (PAI) learning is the ease of access to a variety of creative learning resources. These digital resources offer multimedia teaching materials, including visual content such as images and illustrations, audio to reinforce explanations, and direct interaction through simulations or quizzes that assess student understanding. This material is obtained not only from local educational institutions but also from various international sources with a universal and contextual Islamic perspective, thereby enriching students' understanding of Islamic teachings comprehensively and across cultures.

Having learning apps aligned with the national curriculum is crucial for ensuring digital materials align with existing educational standards. Interactive materials and modules from trusted Islamic organizations are available for free or for a fee, giving teachers and students the option to choose learning resources that align with their needs and financial capabilities. These platforms enable Islamic Religious Education (PAI) learning to be more contextual, enabling students to understand current issues related to Islamic teachings directly from credible and legitimate sources.

The use of digital technology also overcomes the limitations of space and time in the learning process. Through online access, students are no longer tied to class schedules or the availability of books in the school library. They can study anywhere and anytime, according to their own pace and individual needs. This is especially important in the context of online learning, where technology serves as a primary tool for ensuring educational continuity. Furthermore, the broader and more up-to-date coverage of materials provides students with opportunities to gain knowledge that is not only theoretical but also practical in the context of their social and cultural lives.

Overall, the variety of digital media in Islamic Religious Education (PAI) learning not only enhances students' learning experiences but also creates opportunities for more inclusive and modern religious education. Effective digital media integration can shift the perspective of Islamic Religious Education (PAI) learning from a passive perspective to a more active and participatory one. Students are invited to not only receive information but also analyze and apply Islamic principles in their daily lives by utilizing high-quality learning resources relevant to the current context.

Improving Learning Efficiency in the Digital Era

Digital technology has enormous potential to connect Islamic teachings with students' lived experiences in a direct and relevant way. In Islamic Religious Education (PAI) learning, the use of digital media such as short films, interactive stories, prayer simulations, and video case studies provides students with the opportunity not only to read about Islamic values but also to see and experience the application of these values in everyday life. For example, through video simulations showing prayer or examples of conversations reflecting tolerance, students gain a deeper understanding of the application of religious values in real-life contexts.

The process of creating these digital materials requires continuous and careful effort to ensure that the content remains aligned with moderate and tolerant Islamic values. Material retrieved from the internet must undergo a rigorous verification process to avoid misinterpretation or potential confusion. It is critical to ensure that the information students receive consistently aligns with the religious principles of *rahmatan lil 'alamin* (blessing for all the worlds). This validation typically involves religious experts and educators who can evaluate the content's suitability to universal Islamic values and the current social context.

Effective digital methods provide a more meaningful dimension to learning because students don't just passively receive information but are also involved in connecting Islamic values to their experiences and social contexts. For example, teaching about honesty isn't just delivered theoretically but also demonstrated through concrete examples at school or in the community that students can witness and understand. With this method, learning values becomes more tangible and applicable, connecting the text of the book to everyday life.

In this context, the role of educators is crucial as instructors and facilitators who support students in understanding and correctly interpreting Islamic values. Teachers need to be able to use digital technology efficiently to adapt the learning process to the needs and advancements of the times. They play a role in fostering reflective and critical discussions so that students not only receive information but also internalize and apply those values in their daily lives. Through this flexible learning approach, it is hoped that students will be able to overcome modern challenges with a strong and relevant foundation of religious values.

Moral and Order Challenges in the Use of Technology

While offering many benefits, the application of technology in Islamic Religious Education (PAI) education also presents challenges, particularly those related to student ethics and attitudes. Some students tend to misuse technology to access content that is inappropriate for education and may even conflict with religious values.

In fact, there's still a phenomenon where students use digital devices not for learning, but for accessing entertainment content, online games, or even information that conflicts with moral norms and religious teachings. This uncertainty in technology use demonstrates the disparity between device access and students' mental readiness and character to use them wisely.

This situation is further complicated by the lack of a fully developed monitoring system or clear guidelines for digital ethics. Many students still lack a grasp of the long-term consequences of their online actions, both educationally and personally. In the context of Islamic Religious Education (PAI) learning, this poses a significant challenge, as the values taught are not only cognitive but also encompass affective and spiritual aspects that should be reflected in concrete actions, including the use of technology.

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Conversely, parental participation is also crucial for improving supervision and educating students about digital ethics. Outside of school, students continue to use digital tools without teacher guidance. Therefore, collaboration and relationships between schools and parents need to be strengthened so that the values taught in class are not merely theoretical but can also be implemented in students' daily activities. Parents need to recognize the critical role they play in supervising, mentoring, and serving as role models in technology use.

Schools must have clear internal policies and regulations regarding technology use. These regulations should not only be restrictive but also provide opportunities for education that instills an understanding of the ethical and moral reasons behind each rule. Instilling digital citizenship can serve as a way to develop students not only technologically proficient but also socially and spiritually responsible in their use of that technology.

Furthermore, providing a regulated and safe digital environment is crucial for building a culture of positive technology use. Schools can collaborate with technology providers to restrict access to inappropriate websites, implement child-friendly learning platforms grounded in Islamic values, and design sophisticated digital monitoring systems. In this context, the development of technology-based character education must be carefully planned, not only as a solution to existing problems but also as an essential part of the overall curriculum.

With these steps, the implementation of digital technology in Islamic Religious Education (PAI) will enhance the effectiveness of learning and also create a generation that is technologically proficient and imbued with integrity. Awareness of the importance of ethics and discipline in the use of technology is key to ensuring that technological advancements do not alienate students from the religious values that underpin Islamic Religious Education.

Opportunities for Islamic Religious Education Innovation Supported by Technology

The integration of digital technology creates significant opportunities for innovation in the development of Islamic Religious Education (PAI) teaching materials. Technology enables the creation of local Islamic learning platforms, the application of artificial intelligence (AI) to tailor materials to students' needs, and the development of virtual reality (VR)-based learning media that can significantly deepen students' spiritual experiences. These innovations require interdisciplinary collaboration between educators, technology developers, and religious institutions to ensure the resulting content remains original and aligned with national education goals. With continuous innovation, PAI can transform into a learning environment that focuses not only on memorization but also on building character and 21st-century skills, and preparing students spiritually to face today's challenges.

The use of digital technology in teaching Islamic Religious Education (PAI) has had significant positive effects, particularly in expanding access to learning resources, enhancing student learning independence, and providing a more interactive and relevant learning context. Technology also facilitates the application of Islamic values in tangible and practical ways through various digital platforms. However, the application of technology poses ethical and disciplinary challenges that require the active involvement of teachers, parents, and strict supervision from schools. Collaboration between families and educators is crucial to supporting digital religious literacy, ensuring that technology use remains efficient and in line with Islamic principles. In general, digital technology can enrich the PAI learning process if integrated wisely and contextually.

CONCLUSION

The integration of information systems in Islamic Religious Education (ISE) has a positive impact on the effectiveness of learning and the development of students' Islamic character. However, to ensure its use aligns with Islamic values, an appropriate approach integrated with Islamic teachings is required. Islamic Religious Education (ISE) teachers must be pioneers in the use of values-based technology, so that the next generation of Muslims will not only be technologically skilled but also behave well.

This research emphasizes the need to improve teacher skills through ongoing training programs in digital literacy and the development of learning materials using technology. Educational institutions must design policies that support the structured integration of technology into Islamic Religious Education (PAI) curricula. Collaboration between educators, students, and other stakeholders in the education sector to develop digital learning resources needs to be strengthened to ensure the relevance and sustainability of innovation.

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