

The Effectiveness of Using Artificial Intelligence in Islamic Religious Education Learning at SMKN 1 Sigi

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ARTICLE INFO	ABSTRACT
Volume: 4 ISSN: 2963-5489	The integration of artificial intelligence (AI) represents a major breakthrough in transforming modern education systems. In the context of Islamic Religious Education (PAI), AI offers opportunities to enhance the effectiveness of material delivery while fostering active student participation. This study aims to examine the effectiveness of AI technology in the PAI learning process at SMKN 1 Sigi. In today's rapidly evolving digital era, AI has become an essential innovation in supporting teaching and learning. This research employed a qualitative descriptive approach with data collected through observation, interviews, and documentation. The findings indicate that AI applications, such as Islamic chatbot-based tools, adaptive learning videos, and AI-driven interactive platforms, improve students' interest, comprehension, and engagement in PAI classes. However, challenges such as uneven digital literacy and the need for careful content monitoring to ensure alignment with Islamic principles remain. Overall, the use of AI in PAI at SMKN 1 Sigi is effective but requires strategic support from both schools and teachers.
KEYWORD	
Artificial Intelligence, Islamic Religious Education, Learning	

1. Introduction

Advancements in digital technology have significantly influenced various aspects of human life, including education. AI represents a transformative innovation with the potential to revolutionize traditional learning methods, making them more interactive, personalized, and efficient. Within PAI, AI provides opportunities to improve the effectiveness of teaching and to encourage students' active participation (Nasiti & Ni'mal, 2020; Nur'inayah, 2021).

Technology adoption in education has changed both teaching practices and the ways students acquire knowledge. Previously, Islamic education relied heavily on face-to-face interactions and printed textbooks. Today, technology integration has broadened access and improved the effectiveness of learning. Nonetheless, the adoption of digital tools in Islamic education presents not only benefits but also ethical and cultural challenges (Putri et al., 2022; Makasihi & Odaya, 2021).

According to Naila (2023), AI represents a significant leap in global scientific and technological development. Although SMKN 1 Sigi has relatively advanced facilities—such as internet access, computer labs, and digital devices—the implementation of AI in PAI remains complex. Beyond infrastructure, teacher competency, pedagogy, and ethics are critical factors in ensuring successful integration (Komalasari, 2022; Pabubung, 2023; Agustina, 2023).

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AI platforms, while advanced, can present content that is inconsistent with Islamic principles if not carefully monitored. Since most AI tools are not designed with religious considerations, teachers must remain selective in curating and verifying content (Arisanti et al., 2024; Baskara et al., 2023). Moreover, the absence of national or school-level policies on AI integration forces teachers to rely on personal initiatives, creating disparities in practice. Some experiment with AI, while others prefer conventional approaches to avoid errors (Chauncey & McKenna, 2023; Fauziah, 2023).

Therefore, while SMKN 1 Sigi is equipped for AI adoption, success in PAI learning requires improving teacher competencies, strengthening content supervision, and formulating adaptive curriculum policies. This study evaluates the effectiveness of AI in addressing these challenges and sustaining innovation in religious education at vocational schools.

2. Literature Review

2.1 Artificial Intelligence (AI)

AI has become a key driver of global scientific and technological progress. Rizaldi (2021) notes that AI not only automates processes but also provides adaptive and personalized learning solutions. In education, AI reduces teachers' administrative workload, delivers instant feedback, and adapts to students' individual learning styles, thereby improving teaching effectiveness (Nugroho & Santosa, 2020).

Artificial intelligence is a technological innovation that continues to advance and plays a strategic role in various sectors of life, including education. AI can improve the efficiency and effectiveness of education systems through various methods, such as adaptive learning, predictive analytics, intelligent guidance systems, natural language processing, and gamification. Artificial intelligence (AI) is likely to continue to develop in the future. This is due to AI's immense capabilities in supporting the optimization and improvement of various sectors of human life, including education (Fuad & Fakhruddin, 2024).

As a continually advancing technology, AI enhances efficiency in education through adaptive learning, predictive analytics, intelligent tutoring systems, natural language processing, and gamification (Fuad & Fakhruddin, 2024). In PAI, however, its application must align with Islamic values and local ethics. Teachers serve as key filters, ensuring AI content adheres to religious principles (Ma'arif, 2022).

2.2 AI in Islamic Religious Education

Practical uses of AI in PAI include Islamic chatbot applications for real-time Q&A, adaptive video-based learning tools, and sharia-compliant educational platforms. Haryanto (2022) highlights that AI makes religious education more relevant to the digital generation, provided that content supervision is maintained. Similarly, Rahman and Zulfikar (2023) emphasize that AI in values-based education must be accompanied by ethical and contextual pedagogy to preserve its moral substance.

3. Methodology

This study adopted a library research method with a qualitative approach, focusing on analyzing the application of humanistic learning theory in an effort to improve student learning outcomes in schools. The research location was SMKN 1 Sigi. Data collection techniques used were through observation of learning activities, interviews with Islamic Religious Education teachers and students, and documentation of the learning media used. Data were analyzed thematically to identify patterns of effectiveness and obstacles in the use of AI in the school environment (Subagyo & Ip, 2020).

Library research is a type of research that uses data sourced from written references, such as books, magazines, and articles available in libraries. In this context, all references used come from literature directly related to the research focus (Rahman & Zulfikar, 2023).

4. Results and Discussion

The use of AI in Islamic Religious Education (PAI) at SMKN 1 Sigi includes Islamic chatbot applications for Q&A sessions on jurisprudence (fiqh) and creed (aqidah), AI-based learning videos that adjust to students' learning pace, and interactive platforms that provide automated feedback. Interviews indicate that students feel more engaged and find it easier to understand PAI material through AI-based media compared to conventional methods. Teachers also noted that AI simplifies

the assessment process and helps track student progress. However, limited training remains a major obstacle to maximizing the full potential of AI.

The implementation of AI in PAI at SMKN 1 Sigi has demonstrated several positive outcomes. This can be seen in the use of Islamic chatbot applications capable of answering students' questions in real time about fiqh, aqidah, and Islamic history. In addition, AI-based learning videos that adapt to individual learning styles and paces serve as effective tools. The interactive learning platform also provides automatic feedback that helps students gauge their level of understanding.

Interviews with several PAI teachers and students suggest that AI enhances learning interest and facilitates comprehension of abstract Islamic concepts. Teachers find it useful for monitoring student progress, as the AI system provides detailed and automatic evaluation reports. Furthermore, digital media makes the learning process more dynamic and less monotonous.

Nevertheless, significant challenges remain. The primary issue is the lack of specific training for teachers in operating and optimizing AI tools. Some teachers still struggle to select and verify digital content to ensure its alignment with Islamic values. Although SMKN 1 Sigi has adequate technological facilities, a more structured implementation strategy is needed to ensure that AI use fully supports the goals of religious education. Therefore, the school's active role in providing technical support and training is crucial to guarantee the sustainability and effectiveness of AI integration in Islamic Religious Education.

5. Conclusion

AI represents a crucial milestone in advancing innovation in Islamic Religious Education. When used wisely, AI accelerates educational transformation, fosters student independence, and nurtures enthusiasm for learning. For teachers, integrating AI must still prioritize core teaching values, including moral and character development. At SMKN 1 Sigi, AI has proven effective in enhancing student participation and comprehension. Nevertheless, its success depends on teacher preparedness, student digital literacy, and careful content selection aligned with Islamic teachings. Continuous institutional support is essential to sustain the role of AI in Islamic education.

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