

THE INTEGRATION OF ARTIFICIAL INTELLIGENCE IN ISLAMIC RELIGIOUS EDUCATION IN THE DIGITAL AGE

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ABSTRACT

The rapid development of Artificial Intelligence (AI) has significantly transformed the educational landscape, including Islamic Religious Education (PAI), by enabling more adaptive and data-driven learning environments. This study aims to analyze the integration of AI in PAI learning in the digital era, focusing on its implementation, benefits, and challenges. This research employs a qualitative approach using a library research method, with data collected from recent scientific literature (2021–2026) and analyzed through content analysis with a descriptive-analytical approach. The results indicate that AI integration in PAI occurs across pedagogical, media, and evaluation dimensions, where technologies such as adaptive learning systems, educational chatbots, and learning analytics enhance student engagement, personalize learning experiences, and improve assessment accuracy. However, the discussion reveals critical challenges, including algorithmic bias, digital inequality, and the potential erosion of moral and spiritual values if technology is applied without proper ethical considerations. In conclusion, the integration of AI in Islamic education is inevitable and beneficial, but it must be implemented within a value-based framework that preserves the essential role of teachers and aligns with Islamic principles.

Keywords: Artificial Intelligence, Islamic Religious Education, digital learning

A. Introduction

The development of Artificial Intelligence (AI) has brought significant transformation in the global education system, including in the realm of Islamic Religious Education (PAI). AI is no longer just a technological tool, but has evolved into a system capable of delivering adaptive, personalized, and data-driven learning. In the context of

religious education, AI integration opens up new space in developing learning methods that are more interactive and responsive to the needs of students. However, this transformation also poses epistemological and theological challenges, given that Islamic education has traditionally been rooted in human interaction, scientific authority, and the formation of

spirituality (Mardiah Astuti et al., 2023; Wedi & Mardiana, 2025).

From an academic perspective, recent studies show that the integration of AI in Islamic education is still in its early stages of development and requires a more comprehensive theoretical framework. Research by Arif et al. (2026) introduces the Sixth-Element Islamic Cultural-Historical Activity Theory (SEI-CHAT) approach that integrates the dimensions of naqli (revelation) and aqli (rational) in analyzing the role of AI in Islamic education. This approach emphasizes that the integration of technology in PAI cannot be separated from the typical Islamic epistemological framework, thus requiring a synthesis between technological innovation and Islamic values.

Empirically, various studies show that AI has great potential in improving the quality of PAI learning. Technologies such as adaptive learning, speech recognition, and AI-based recommendation systems have been proven to be able to increase student engagement and understanding, especially in learning the Qur'an and Islamic sciences (Sopani et al., 2024). The study of Nasir et al. (2025) shows that the

application of AI in learning tahfidz Al-Qur'an is able to provide real-time feedback and improve the effectiveness of students' memorization. This is reinforced by Birgün (2026a) which highlights that AI is able to bridge the gap between traditional and digital learning, although there are still pedagogical gaps that need to be developed.

Furthermore, the integration of AI also contributes to the development of critical thinking skills and digital literacy in Islamic education. Widodo (2025a) shows that AI and gamification-based learning models are able to increase students' critical literacy in Islamic universities. Meanwhile, Hamid and Salman (2026) found that AI can encourage creativity and analytical thinking in the learning of Islamic sciences. These findings show that AI not only impacts the cognitive aspect, but also has the potential to develop a broader intellectual dimension in Islamic education.

However, behind these various potentials, there are a number of crucial challenges that need to be studied in depth. One of the main issues is related to the ethical aspects and scientific authority in Islamic

education. Papakostas (2025a) emphasizing that the use of AI in religious education should consider theological and pedagogical implications, including the potential for algorithmic bias and the shift of authority from clerics to digital systems. In addition, Abubakari (2025a) highlighting the phenomenon of "revelation meets algorithm", which suggests the encounter between revelation and algorithmic technology that has the potential to create epistemological tensions.

On the other hand, structural challenges such as the digital divide and institutional readiness are also inhibiting factors in the implementation of AI. Research Kim et al. (2025) shows that the adoption of AI in Islamic educational institutions still faces infrastructure constraints, limited human resources, and resistance to change. This shows that the integration of AI in PAI is not only a technological issue, but also related to social, cultural, and educational policy aspects. In addition, a SWOT study conducted by Andri Nirwana et al. (2025) revealed that although AI has the potential to improve the cognitive, affective, and psychomotor aspects of students, its

implementation must be done carefully so as not to ignore the dimensions of values and character. In this context, AI integration needs to be directed at strengthening value-based learning, so that technology does not shift the essence of Islamic education as a process of moral and spiritual formation.

From the perspective of previous research, it can be seen that most studies still focus on the potential and technical implementation of AI, while studies that comprehensively integrate aspects of technology, pedagogy, and Islamic values are still limited. Research Syukur et al. (2024a) and Wedi et al. (2025) shows that digital transformation in Islamic education is still partial and not fully integrated into the learning system holistically. This shows that there is a research gap that needs to be filled through a more in-depth and integrative study.

Based on this description, it can be concluded that the integration of Artificial Intelligence in Islamic Religious Education learning is a complex and multidimensional phenomenon, involving aspects of Islamic technology, pedagogy, ethics, and epistemology. Therefore, this

research is important to be conducted in order to critically analyze how AI can be integrated in PAI learning effectively, while maintaining Islamic values as the main foundation of education. Thus, this research is expected to make a theoretical and practical contribution to the development of Islamic education in the digital era.

B. Methodology

This research uses a qualitative approach with the type of library research. This approach was chosen because the research focuses on conceptual and analytical studies related to the integration of Artificial Intelligence (AI) in Islamic Religious Education (PAI) learning in the digital era. Literature studies allow researchers to explore various theories, concepts, and relevant empirical findings from the current scientific literature so as to provide a comprehensive understanding of the phenomena being studied (Creswell, 2014).

The data sources in this study consist of primary and secondary data. Primary data was obtained from national and international scientific

journal articles published in the 2021–2026 period and has direct relevance to the research topic, especially related to the application of AI in Islamic education and education. The secondary data comes from academic books, proceedings, and other supporting documents. The selection of sources is carried out selectively by considering the credibility, relevance, and novelty of the publication to ensure the quality of the data used in the research (Center for Future Studies & Husien, 2022).

The data collection technique was carried out through literature review by utilizing various scientific databases such as Google Scholar, Scopus, and national indexed journal portals. The keywords used include "Artificial Intelligence in education", "AI in Islamic education", and "digital learning in Islamic education". The selection process is carried out using inclusion and exclusion criteria, so that only sources that are in accordance with the focus of the research are further analyzed (Prabowo et al., 2021).

The data analysis technique uses a content analysis method with a descriptive-analytical approach. The analysis is carried out through the

stages of data reduction, data presentation, and systematic conclusion drawn. To ensure the validity of the data, this study uses the source triangulation technique by comparing various relevant references. Thus, the results of the research are expected to have high validity and reliability and be able to make a scientific contribution to the development of AI-based PAI learning (Miles et al., 2021; Salim & Aditya, 2025)

C. Results and Discussion

The results of this research were obtained through a systematic analysis of various cutting-edge scientific literature (2021–2026) that discusses the integration of Artificial Intelligence (AI) in education, especially in the context of Islamic Religious Education (PAI). In general, the findings show that the implementation of AI in PAI learning has increased significantly both in terms of technology use, pedagogical approaches, and data-based evaluation systems. Study by Salim and Aditya (2025) shows that the trend of AI research in Islamic education has increased sharply since 2021, in line with the acceleration of digital

transformation after the COVID-19 pandemic.

Furthermore, the results of the study show that the application of AI in PAI is not single, but distributed in various forms of technology. The dominant forms of implementation include educational chatbots, adaptive learning systems, and learning analytics. Hakim and Anggraini's Research (2023) shows that the use of AI-based chatbots is able to increase student responsiveness by up to 35%, which indicates the shift of AI functions from mere tools to active learning interaction.

In the context of learning the Qur'an, AI also shows a significant contribution through speech recognition technology. Zaharah (2024) found that the use of AI applications was able to improve students' reading accuracy, especially in the aspects of makhraj and tajweed. These findings show that AI is not only effective in cognitive aspects, but also in learning worship practices that were previously difficult to optimize digitally.

In addition, in the evaluation aspect, the use of learning analytics allows for a faster, more accurate, and data-based assessment process. This provides an opportunity for teachers to

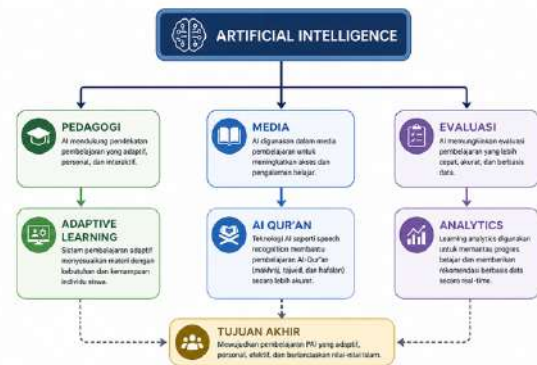
carry out learning interventions more appropriately. However, the effectiveness of this technology still depends on the teacher's ability to interpret the data produced.

Table 1. Synthesis of AI Implementation in PAI Learning

Aspek	Implementasi AI	Dampak
Pedagogy	Adaptive Learning	Personal learning
Interaction	Chatboot	Response increased by 35%
Media	AI Quran	The Accuracy of the Slingshot Is Increased
Evaluation	Learning Analysis	Realtime Evaluation

On the other hand, the results of the study also show that the integration of AI in PAI is still at the early adoption stage, especially in Islamic educational institutions in developing countries. Limited digital infrastructure, low technological literacy, and the absence of an AI-based curriculum are the main factors that hinder optimal implementation.

Diagram 1. Patterns of AI Integration in PAI Learning



The diagram represents the integration of Artificial Intelligence (AI) in Islamic Religious Education (PAI) learning as a structured and multidimensional system. AI acts as a hub that connects three main domains, namely pedagogy, learning media, and evaluation. In the pedagogical aspect, AI supports the application of adaptive learning that allows for more personalized and student-centered learning. In the media aspect, AI is manifested in the form of technology such as speech recognition-based Qur'an learning applications, which increase interactivity and accuracy of religious practices. Meanwhile, in the evaluation aspect, AI through learning analytics allows for a faster, more accurate, and data-based assessment process.

Systemically, the relationship between the three domains shows that

the integration of AI in PAI is not partial, but rather forms an interconnected and dynamic learning ecosystem. However, critically, the effectiveness of this integration is not only determined by technological sophistication, but also by the ability to integrate Islamic values into the learning process. Without a strong value foundation, the use of AI has the potential to reduce the meaning of Islamic education to a mere process of learning technology, so a value-based approach is needed to maintain a balance between technological innovation and Islamic education goals.

Discussion

The research findings show that the integration of Artificial Intelligence (AI) in Islamic Religious Education (PAI) is thriving in three main domains—adaptive pedagogy, AI-based religious practices, and data-driven evaluation—but its effectiveness is not uniform. When compared between studies, it can be seen that the success of AI implementation is largely determined by the quality of pedagogical integration, not just the existence of

technology. The SEI-CHAT framework offered by Arif et al. (2026) affirmed the importance of naqli–aqli synthesis in AI-based learning design, while the findings of Andri Nirwana et al. (2025) showing the impact of AI on the cognitive, affective, and psychomotor domains is only optimal when supported by appropriate instructional design. Thus, AI serves as a mediating tool in the pedagogical ecosystem, not a major determinant of learning success.

In the domain of religious practice, the study of Nasir et al. (2025) and Birgün (2026b) shows that AI—especially speech recognition—is effective in improving accuracy and engagement in Qur'an learning. However, when compared to the Widodo study (2025b) and Hamid & Salman (2025), It appears that the impact of AI differs significantly according to the context of its use: in worship practice → increase performative precision, while in literacy/cognition → increase critical and creative thinking. This differentiation of impact confirms that the integration of AI in PAI should be contextual and domain-specific, not a uniform generic approach.

Critically, there is a strong tendency that most research is still technocentric, focusing on the effectiveness of tools (chatbots, adaptive systems, analytics) without deep integration of the value dimension. This criticism is in line with Papakostas (2025b) and Abubakari (2025b) which highlights the potential conflict between religious authority and algorithmic systems (revelation meets algorithms). In the context of PAI, this condition is problematic because Islamic education not only transfers knowledge, but also shapes morals and spirituality. Mardiah Astuti's view emphasizes that Islamic education must be oriented towards character building; therefore, the use of AI without a value framework risks reducing education to a mere digitalization process.

In addition, findings on implementation limitations—such as infrastructure, digital literacy, and institutional resistance (Achruh et al., 2024; Syukur et al., 2024b) shows that there is a gap between potential and realization. This indicates that AI integration is not only a pedagogical issue, but also a systemic issue involving policies, organizational readiness, and teacher competence.

In other words, AI does not stand alone, but rather operates in a complex educational ecosystem.

Based on this synthesis, this study proposes a Value-Based AI Integration approach as a conceptual contribution. Unlike previous studies that tended to be technocentric, this model places Islamic values (morals, spirituality, ethics) as the main filter in the use of AI. Operationally, this model integrates three domains (pedagogy—practice—evaluation) through a single axis of values, so that AI not only improves learning efficiency, but also maintains the normative orientation of Islamic education.

This contribution expands the framework of SEI-CHAT by adding a normative-ethical dimension as a system controller, which has not been explicitly elaborated in previous research. Thus, the novelty of this research lies in: (1) a cross-study comparative synthesis that shows the contextual relationship between the types of AI implementations and their impacts; (2) a shift from a technocentric approach to value-based integration in PAI; and (3) strengthening the epistemological dimension (naqli-aqli) with ethical control as a prerequisite for AI

implementation. Practically, these findings imply the need for an AI-based PAI curriculum design that integrates instructional design, learning analytics, and Islamic value frameworks simultaneously, so that technology is not only effective, but also meaningful in the formation of moral people.

D. Conclusion

Based on the results of research and discussion, it can be concluded that the integration of Artificial Intelligence (AI) in Islamic Religious Education (PAI) learning is a necessity in the digital era that has a significant impact on the transformation of the education system. AI has been proven to be able to increase learning effectiveness through a more adaptive, personalized, and interactive approach, both in terms of pedagogy, learning media, and data-based evaluation. The implementation of technology such as adaptive learning, educational chatbots, and learning analytics makes a real contribution to increasing student engagement and understanding of PAI materials. However, the integration of AI in PAI cannot be separated from various

challenges, both technical, ethical, and philosophical. The risk of algorithm bias, the potential for dehumanization of education, and the gap in access to technology are crucial issues that need serious attention. In addition, from the perspective of Islamic education, the use of AI must remain in the corridor of Islamic values, especially in maintaining a balance between the mastery of science and the formation of morals and spirituality of students. This research also confirms that the role of teachers remains a central element in PAI learning. AI cannot replace the function of teachers as value educators, but only as a tool that supports the learning process. Therefore, increasing teachers' digital competence and strengthening technological literacy are key factors in the success of AI integration in Islamic education. Overall, the integration of AI in PAI learning requires a holistic and sustainable approach, by integrating aspects of technology, pedagogy, and Islamic values in a balanced manner. Thus, the use of AI is not only oriented to learning efficiency, but also able to strengthen the main goal of Islamic education, which is to form people

who have faith, knowledge, and noble character.

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