

Exploring AI in Islamic Education and Knowledge: Between Automation, Ethics, and Spirituality

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ARTICLE INFO	ABSTRACT
Volume: 4 ISSN: 2963-5489	This study explores the role of Artificial Intelligence (AI) in Islamic education by focusing on three interrelated dimensions: automation, ethics, and spirituality. The purpose of the research is to analyze how AI influences learning processes, to identify ethical implications arising from its use, and to evaluate how spiritual values can be preserved in digital learning environments. A qualitative approach was employed through library research and content analysis of academic publications, proceedings, and books published between 2020 and 2025. The analysis was carried out comparatively to identify similarities, differences, and unique contributions across various studies, followed by a synthesis to form a comprehensive conceptual framework. The results show that AI contributes positively to automation by streamlining administrative tasks, personalizing learning experiences, and expanding access to education, particularly in Islamic learning contexts. However, ethical challenges such as data privacy, algorithmic bias, and the risk of dehumanization highlight the need for responsible governance. Furthermore, the spiritual dimension underscores that AI can only serve as a supportive tool and not replace the moral and spiritual authority of teachers or the sacredness of Islamic texts. The study concludes that integrating AI in Islamic education requires a holistic framework that balances efficiency and innovation with ethical responsibility and spiritual integrity. Such integration must be guided by Islamic educational values to ensure that AI enriches, rather than diminishes, the goals of nurturing faith, intellect, and character.
KEYWORD Islamic Education, Automation, Ethics; Spirituality, Digital Learning, Moral Values, Educational Technology	

1. Introduction

The development of Artificial Intelligence (AI) over the past two decades has brought significant transformation across various aspects of life, ranging from health and economics to education. According to a recent UNESCO report (2023), the integration of AI in the education sector has the potential to enhance learning effectiveness, expand access for marginalized groups, and provide more personalized and adaptive learning models. Globally, AI has been widely utilized through intelligent tutoring systems, big data analysis for student evaluation, and educational chatbots that function as virtual assistants. However, the implementation of AI in Islamic education faces complex challenges. On one hand, this technology holds great potential to drive automation in the learning process, such as in material development, assessment, and administrative services. On the other hand, pressing ethical issues emerge, including data privacy, information reliability, and the risks of

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algorithmic bias. Furthermore, concerns arise regarding how spirituality—the core of Islamic education—can be preserved amidst the rapid wave of digitalization that often prioritizes technical efficiency over value-driven depth.

Based on these issues, this paper seeks to address three main questions: (1) how AI influences automation in Islamic education, (2) what ethical implications arise from the application of AI in this field, and (3) how spirituality can be maintained within a digitalized education system. The study aims to explore the role of AI in the Islamic educational process, examine the accompanying ethical and spiritual dimensions, and provide a critical perspective on the integration of technology with religious values. Thus, this research is expected to offer both academic and practical contributions to the development of Islamic education in the era of artificial intelligence.

2. Literature Review

2.1 AI in the Context of Global Education

AI in global education continues to advance, particularly through intelligent tutoring systems (ITS) and adaptive learning. For example, a recent systematic review reported that the use of ITS at the K–12 level generally improves student learning outcomes, though the effect is slightly lower compared to non-ITS systems, and it recommended further research with larger samples as well as closer monitoring of the ethical aspects of AI use. Applications of AI in education include adaptive learning platforms that curate content according to student needs, analytics tools to predict performance, chatbots for learning support, and machine learning (ML) technologies that automate administrative tasks such as grading and scheduling so that teachers can focus on instruction. These developments align with the growing use of large language models such as GPT-4, which are predicted to further enrich digital learning environments with interactive dialogue. In short, AIEd has the potential to personalize teaching materials and streamline educational administration, but the literature emphasizes the need for careful evaluation of its long-term educational value (Létourneau et al., 2025).

2.2 AI and Islamic Education

Several preliminary studies have examined the use of AI in Islamic education, highlighting both opportunities and specific challenges. Mainuddin et al. (2025), for instance, reported that AI in Islamic studies courses can accelerate learning processes (such as text drafting), broaden access to references, and deepen conceptual understanding of materials, but it also risks oversimplifying sacred texts due to AI's limited ability to capture religious nuance. Another study in Islamic schools in Indonesia found that AI tools (such as adaptive feedback in Qur'an learning) improved students' understanding and motivation in religious subjects. However, educators emphasized that AI should complement—rather than replace—the role of teachers to ensure that spiritual and moral dimensions are preserved (Djazilan, Rulyansah, & Rihlah, 2024). In other words, the literature suggests that AI can enrich Islamic learning as long as its implementation aligns with Islamic values and traditional pedagogical methods.

2.3 Digitalization of Islamic Learning

Previous research has shown how digitalization has permeated various aspects of Islamic learning. Alwi, Lutfi, and Nahuda (2025) examined the MTQ–Qiraah application for teaching Qur'anic naghām and found that this interactive app increased students' enthusiasm and improved their understanding of maqāmāt tilāwah compared to conventional methods. Similarly, research in several high schools in Central Sulawesi showed that digital-based Islamic Religious Education (using instructional videos and online modules) improved students' digital competence, learning outcomes, and critical thinking skills—provided sufficient resources were available (Abu et al., 2025). These findings reflect how digital platforms (from Qur'an memorization apps to online religious learning) can expand access to and improve the quality of religious education. However, these studies also highlighted practical challenges such as limited devices, internet access, and teachers' digital skills that must be addressed to optimize the benefits.

2.4 The Automation Aspect

The automation aspect of AI in education includes streamlining administrative tasks, personalizing learning, and improving accessibility. AI technologies can automate routine tasks such as quiz grading or student data management, thereby freeing up teachers' time for creative teaching activities (Létourneau et al., 2025). Adaptive learning systems can tailor teaching materials to each student's ability and learning pace, ensuring more personalized attention for every individual (Létourneau et al., 2025). General literature reviews also indicate that AI contributes to improved learning outcomes through personalized instruction (Garzón, Patiño, & Marulanda, 2025). Moreover, automation allows learning materials to be made more widely available (e.g., through online platforms), enabling students in remote areas to learn anytime. In short, the implementation

of AI-driven automation is expected to enhance administrative efficiency, provide more personalized learning experiences, and promote more inclusive access to education.

2.5 The Ethical Aspect

Ethical concerns are a major focus in the implementation of AI in education. The massive collection of student data and its analysis by AI algorithms raise serious concerns about privacy—risks of data breaches or unauthorized digital surveillance can undermine students’ rights and autonomy. In addition, algorithmic bias is a critical issue: AI may reinforce biases in training data, potentially leading to discrimination or unfairness in assessments and learning recommendations. Some observers even emphasize the risk of dehumanizing learning: if teacher-student interaction is significantly reduced due to AI dominance, important aspects such as character building and social-emotional learning may be neglected (Donatus et al., 2024). These ethical issues underscore the need for responsible AI design that protects student privacy, avoids bias, and maintains human relationships in the educational process.

2.6 The Spiritual Aspect

The spiritual aspect highlights the challenge of preserving Islam’s transcendental values in the technological era. For example, a study in Islamic schools in Gresik revealed that while AI can enrich Qur’an learning and ethical discussions, educators argued that AI should complement, not replace, teacher instruction so that spiritual and moral dimensions are not lost (Djazilan et al., 2024). Mainuddin et al. (2025) also noted the need for human verification, as AI risks “simplifying” sacred texts without fully grasping their religious context. Thus, the literature emphasizes that although AI offers innovation, its integration in Islamic education must be carefully managed to ensure that values of worship, piety, and noble character are preserved. The development of AI-based teaching models should be aligned with religious interpretive frameworks (e.g., considering sanad and context) to safeguard the integrity of Islamic teachings within an automated learning environment.

2.7 Research Gap

Although there is a growing body of research on AI in both general and Islamic education, integrated studies that connect automation, ethical issues, and spiritual aspects remain limited. For instance, a recent systematic review concluded that AIED research tends to focus on students’ cognitive outcomes and motivation, while socio-emotional and ethical dimensions receive less attention (Garzón et al., 2025). In the context of Islamic education, Djazilan et al. (2024) explicitly proposed that future studies should explore the long-term impact of AI on moral and faith education. This highlights the need for a holistic research framework that combines technological automation capabilities with ethical considerations and the spiritual goals of Islamic education.

3. Methodology

This research employs a qualitative approach using library research and content analysis methods. This approach was chosen because the focus of the study lies in conceptual exploration and the mapping of ideas related to the application of artificial intelligence (AI) in Islamic education, particularly in the aspects of automation, ethics, and spirituality. The qualitative method enables the researcher to delve deeper into the meanings within various bodies of literature and to provide a critical analysis that is not only descriptive but also interpretative (Waruwu, 2024).

3.1 Source Identification

The initial stage of the study involved identifying relevant literature sources, including reputable international journals (Scopus, WoS), accredited national journals (Sinta), conference proceedings, and academic books published between 2020–2025. The search keywords used include: *artificial intelligence in education*, *Islamic education and AI*, *automation in learning*, *ethics of AI*, and *spirituality in digital education*. The chosen timeframe aimed to ensure the currency of information and its relevance to recent technological developments.

3.2 Critical Analysis

After identifying the literature, the next step was to conduct a critical analysis of the content. The analysis focused on three main themes: automation, ethics, and spirituality in Islamic education. This process was carried out comparatively by examining the similarities, differences, and unique contributions of each study. Furthermore, each source was evaluated for credibility based on the publisher’s reputation, citation count, and the consistency of its arguments. This analysis provided a comprehensive overview of how AI has, is currently, and could potentially influence Islamic education.

3.3 Synthesis

The final stage was synthesis, which involved combining findings from various sources to develop a conceptual framework explaining the relationship between AI and Islamic education. This synthesis not only presented a summary of previous studies but also integrated the aspects of automation, ethics, and spirituality into a coherent model of thought. Thus, this methodology is expected to produce a critical and constructive perspective on the integration of AI technology into Islamic education while also providing a theoretical foundation for future research.

4. Results and Discussion

The findings of this study reveal that the use of AI in Islamic education operates within a complex framework that encompasses the dimensions of automation, ethics, and spirituality. In terms of automation, recent literature shows that AI technologies significantly facilitate both learning and administrative processes. Systems such as intelligent tutoring systems have been proven to enhance academic achievement through personalized instruction (Garzón et al., 2025), while digital Qur'an-based platforms or naghām applications help students grasp recitation materials more quickly (Alwi et al., 2025). These advantages align with UNESCO's (2023) findings that AI can expand educational access, especially for marginalized groups. However, in the context of Islamic education, automation outcomes often face infrastructural challenges such as limited devices and teachers' digital literacy (Abu et al., 2025). Thus, although AI has the potential to strengthen efficiency and accessibility, its impact heavily depends on the readiness of the educational ecosystem, both in terms of technology and human competence in managing it.

From an ethical perspective, the analysis highlights serious challenges consistent with global research. Student data privacy and algorithmic bias emerge as dominant concerns. Donatus et al. (2024) emphasize that large-scale data collection can lead to vulnerabilities such as breaches or excessive surveillance. Moreover, algorithms trained on biased data may result in discriminatory practices, for instance in student assessment or learning recommendations. In the context of Islamic education, this raises the risk of misinterpretation of religious texts if AI is applied without human supervision (Mainuddin et al., 2025). This discourse underscores the importance of ethical governance, including data protection, algorithmic fairness, and transparency in AI use. Furthermore, the ethical dimension here is not only technical but also philosophical, as it relates to questions about the authority of teachers, scholars, and sacred texts within a highly automated digital space.

The spiritual dimension emerges as the most critical point in integrating AI with Islamic education. Several studies emphasize that while AI can serve as a supportive instrument in teaching the Qur'an or ethical materials, it cannot replace the role of teachers as moral and spiritual exemplars (Djazilan et al., 2024). AI operates at the level of symbols and data, whereas spirituality requires the internalization of values and transcendental experiences that cannot be programmed. Thus, the central question is not "Can AI teach Islam?" but rather "How can AI assist without reducing the spiritual substance of education?" These findings reinforce the view that AI should be positioned as a *wasilah* (means) to broaden access and effectiveness, not as the primary actor in the education of faith. If mismanaged, there is a risk of dehumanization and oversimplification of religious meaning—for instance, when AI provides theological answers without considering sanad, interpretive context, and wisdom that form the essence of Islamic tradition.

Comparatively, this study highlights a gap between AI's technical potential and the value-based needs of Islamic education. The general literature emphasizes AI's success in improving cognitive learning outcomes (Garzón et al., 2025), but affective and spiritual dimensions remain underexplored. In this regard, studies in Islamic education underline the need for a holistic approach, where technological automation is combined with Islamic ethics and directed toward strengthening spirituality. Such an integrative model requires regulations, curricula, and teacher training to ensure that AI use does not fall into purely pragmatic orientations but instead supports character formation and piety. In other words, AI can serve as a strategic innovation, but only if it is designed in accordance with *maqāṣid al-sharī'ah*—the objectives of Islamic education that emphasize the preservation of faith, intellect, and morality.

5. Conclusion

This study concludes that the use of AI in Islamic education offers significant opportunities through the automation of learning and administration, yet at the same time presents ethical and spiritual challenges that cannot be overlooked. AI can enhance efficiency and access, but its application must be carefully managed to avoid issues such as privacy violations, algorithmic bias, and the dehumanization of the educational process. Furthermore, spirituality—as the core of Islamic education—emphasizes that AI should function only as a supporting instrument, not as a replacement for the authority of teachers and sacred texts. Therefore, the integration of AI into Islamic education needs to be directed toward a holistic approach that balances technical aspects, ethical concerns, and spiritual values in line with *maqāṣid al-sharīʿah*.

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