



Islamic Pedagogical Transformation in the Digital Age: A Systematic Review on the Integration of Artificial Intelligence in Islamic Education

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ABSTRACT

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This study aims to the integration of Artificial Intelligence (AI) in Islamic Religious Education (IRE) amid rapid digital transformation. Employing a systematic literature review guided by PRISMA protocols, data were retrieved from major indexed databases using targeted keywords and Boolean operators. Following a rigorous two-phase screening and predefined inclusion criteria, selected studies underwent thematic-interpretive synthesis to map pedagogical shifts. The findings reveal three critical dimensions. First, AI transitions teachers from knowledge transmitters to facilitators of adaptive, personalized learning while automating administrative burdens. Second, pedagogical deconstruction highlights the irreplaceable role of teachers as moral exemplars (uswah hasanah) and critical thinking guides, prioritizing spiritual and humanistic development over mere data transfer. Third, while AI enhances efficiency, accessibility, and student engagement, it simultaneously poses profound challenges, including data privacy risks, algorithmic bias, eroded traditional spiritual interactions (talaqqi), and the widening digital divide. Ultimately, successful AI integration requires balancing technological innovation with Islamic ethical principles, advocating for enhanced educator digital literacy and equitable policies to foster a progressive, spiritually grounded educational ecosystem.

INTRODUCTION

The shift of the educational ecosystem toward the digital realm has spurred the accelerated adoption of technology in Islamic educational institutions, including in the delivery of Islamic Religious Education (IRE). According to the Ministry of Education, Culture, Research, and Technology's National Digital Literacy Survey (2024), 68% of PAI teachers at the MI/MTs/MA levels have utilized digital platforms for material distribution and assessment, yet only 21% have systematically integrated artificial intelligence (AI) as a pedagogical partner or facilitator of adaptive learning (Muhammadiyah 2025). This finding aligns with data from the Director General of Islamic Education at the Ministry of Religious



Affairs (2025), which reports that 74% of madrasahs have met basic digital infrastructure standards; however, 63% of PAI teachers still note that the AI literacy training they received was technical and instrumental in nature and did not address ethical, spiritual, or reconstructive dimensions of the murabbi's role in algorithmic spaces (Manggala et al. 2025). At the student level, an APJII survey (2025) notes that Gen Z and Alpha students in Indonesia spend an average of 4.2 hours per day interacting with machine-recommended digital content, creating a dissonance between the PAI learning rhythm which remains text-based and dogmatic and their need for an approach that is personalized, reflective, and responsive both cognitively and spiritually (Maulida and Makrufi 2025). The gap between madrasah digitalization policies, teachers' pedagogical capacity, and the learning characteristics of this digital generation indicates that the transformation of Islamic pedagogy is not yet

Recent literature reviews have begun to explore the intersection between digital transformation and Islamic religious education, but the mapping of this intersection remains fragmented across partial dimensions. For example (Ananda, 2024) examines the revitalization of Islamic Education through adaptive technology in the Society 5.0 era, yet the primary focus remains on conceptual frameworks without comprehensively exploring empirical evidence of artificial intelligence integration in classroom practice. On the other hand, (Kobandaha et al. 2025) offer a literature review on AI-based Islamic education management, which tends to emphasize administrative aspects, institutional governance, and digital infrastructure rather than the transformation of pedagogical strategies and teacher-student interactions. Meanwhile, (Nurhayati et al. 2025) examine the transformation of PAI learning based on digital technology in general; however, their discussion has not specifically isolated the role of AI as an agent of curriculum change, adaptive learning models, or the development of teachers' pedagogical competencies. Consequently, although research interest in the digitalization of Islamic Education is growing rapidly, existing literature has yet to address critical questions regarding how empirical evidence, pedagogical patterns, ethical challenges, and frameworks for integrating artificial intelligence into Islamic Education can be systematically and structurally synthesized. These methodological and substantive gaps indicate that a systematic review of the integration of artificial intelligence into Islamic education remains an unaddressed research gap, making it urgent to fill this gap

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in order to provide a holistic theoretical, practical, and policy foundation for the development of Islamic pedagogy in the digital age.

Based on the empirical and theoretical gaps that have been identified, this study aims to conduct a systematic review of the integration of artificial intelligence in Islamic Religious Education (IRE) to map, synthesize, and critique the latest scientific evidence regarding the transformation of Islamic pedagogy in the digital age. Operationally, this study is designed to address three critical dimensions: first, analyzing integration of AI in Islamic education; second, pedagogical deconstruction: a new approach to AI-based Islamic education; and third, identifying opportunities and challenges the gaps in capacity, infrastructure, and AI literacy agendas faced by both teachers and Islamic educational institutions. Through a thematic synthesis of the literature meeting the inclusion criteria, this article not only seeks to consolidate findings that remain scattered and fragmented but also formulates a pedagogically responsive AI integration framework aligned with the maqashid of Islamic education and feasible for implementation for future curriculum development, teacher training, and PAI policy.

METHOD

This study adopts a qualitative approach through a systematic literature review with thematic-interpretive synthesis to construct a critical understanding of the transformation of Islamic Education pedagogy in the digital age (Malahati et al. 2023). In the context of the literature review, primary data comprising peer-reviewed empirical studies, theses/dissertations, and conference proceedings reporting direct findings on the integration of AI in PAI instruction were accessed via indexed databases. Secondary data includes review articles, policy documents (from the Ministry of Religious Affairs and the Ministry of Education and Culture), digital curriculum guidelines, and normative-fiqh literature that provide institutional, ethical, and legal contexts for the adoption of technology in Islamic educational institutions. Tertiary data is obtained from citation indices that track the evolution of discourse, identify publication biases, and validate the scope of interdisciplinary findings.

To ensure methodological rigor and transparency, the SLR procedure was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (Lee and Koo 2022). The process commenced with the formulation of specific

research questions and the execution of a comprehensive search strategy. Targeted keywords and Boolean operators were utilized to retrieve literature from major indexed academic databases. Subsequently, predefined inclusion and exclusion criteria were applied to filter the retrieved records based on publication timeframe, document type, language, and topical relevance. The study selection process involved a rigorous two-phase screening: an initial evaluation of titles and abstracts, followed by a comprehensive full-text assessment to determine final eligibility. Finally, relevant data from the selected studies were extracted and subjected to thematic-interpretive synthesis to identify recurring patterns, conceptual gaps, and critical dimensions regarding AI integration in Islamic pedagogy (Rachmawati, 2024).

RESULTS AND DISCUSSION

Integration of AI in Islamic Education

The integration of artificial intelligence (AI) into Islamic religious education has fundamentally shifted the teaching paradigm, with teachers no longer serving as the primary source of knowledge but instead transforming into facilitators of adaptive learning (Febriyanti, Marlina, and Andini 2026). Various recent literature reviews indicate that technology is now capable of handling routine cognitive tasks that were previously the primary responsibility of educators, thereby transforming the pedagogical landscape in Islamic Religious Education (IRE) classrooms (Febriyanti et al. 2026). This shift is not merely a replacement of teaching aids, but rather a restructuring of roles that requires an adjustment of competencies toward mentoring, character development, and more personalized learning management. Thus, this transition should be consistently viewed as an evolutionary response to technological advancements that require PAI teachers to optimize their presence in the human and spiritual dimensions.

One of the most notable aspects of AI integration in Islamic Education is its ability to provide highly adaptive personalized learning tailored to the unique needs of each student (Nurhayati et al. 2024). Every student has a different learning pace, cognitive style, and religious background, and AI can bridge these gaps very effectively. For example, in Quranic studies, AI-based applications can analyze students' recitation in real time, detect errors in tajwid or the articulation of letters, and immediately provide corrections and exercises tailored to the student's skill level (Andreana et al. 2024). For ethics lessons, AI can recommend case studies or inspirational stories that align with students' psychological and

moral development, making the instillation of positive values more contextual and heartfelt (Nugraha and Harsono 2024). This personalized approach ensures that no student is left behind or feels frustrated by material that is too difficult, nor does any student feel bored by material that is too easy. In this way, AI helps create an inclusive PAI learning ecosystem, where every student can thrive to their full potential without feeling pressured by uniform and rigid learning pace standards.

In addition to improving the quality of teaching and learning interactions in the classroom, the integration of AI is also having a revolutionary impact by automating various administrative tasks that have long been a burden on Islamic Education teachers (Maulidiyah et al, 2026). Religious education teachers often have to divide their attention between teaching, guiding students' character development, and handling complex administrative tasks, such as creating lesson plans (RPP), assessing learning outcomes, tracking attendance, and compiling reports on students' spiritual progress. By leveraging AI technology, these repetitive and time-consuming processes can be completed automatically, quickly, and accurately. The time saved from automating these administrative tasks is invaluable, as it allows PAI teachers to focus on aspects that cannot be replaced by machines: spiritual guidance, personal counseling, and building strong emotional bonds with students. Teachers can more freely engage in in-depth discussions about Islamic values or provide specialized guidance to students experiencing an identity crisis or moral issues. Therefore, administrative automation by AI is, in essence, a form of empowerment for teachers to return to the core essence of their profession as educators and character builders (Idawati et al. 2025).

Overall, the integration of AI into Islamic Education offers a new paradigm that promises efficiency, effectiveness, and meaningfulness in the process of Islamic education. The combination of AI's role as a facilitator of interactive media, its ability to personalize materials on the Qur'an, Fiqh, and Akhlak, and the automation of administrative tasks creates a holistic, student-centered educational ecosystem. However, the implementation of this technology is not without a number of challenges that must be anticipated wisely. Educators and educational institutions must ensure that the use of AI remains within the bounds of Islamic ethics, where technology must not diminish the essence of human exemplary conduct or replace the teacher's role as an *uswah hasanah* (a good role model). Additionally, there is a need to enhance digital literacy and provide ongoing training for Islamic education teachers

so they can operate and oversee AI systems critically and responsibly. Student data privacy must also be a top priority in the use of AI-based platforms. Moving forward, the synergy between artificial intelligence and human wisdom in religious education will be the key to success in shaping a generation that is not only intellectually intelligent and technologically skilled but also possesses a strong foundation of faith and noble character. With a balanced and focused approach, AI can be an invaluable strategic partner in realizing a vision of Islamic education that is progressive, inclusive, and relevant to the demands of the modern age, without losing its spiritual identity (Juliani, et al 2026).

Pedagogical Deconstruction: A New Approach to AI-Based Islamic Education

In the contemporary educational landscape, the integration of artificial intelligence (AI) has sparked a profound shift in pedagogical paradigms, particularly in the teaching of Islamic Religious Education (IRE). Traditionally, the primary role of Islamic Education teachers has often been reduced to that of mere conveyors of information or facilitators of knowledge transfer, in which students are viewed as passive recipients who memorize Islamic principles, Islamic history, or fiqh rules in a one-way process (Ramadhani and Muhroji 2022). However, the emergence of AI which can provide instant and accurate access to religious information has significantly disrupted this conventional model. If a teacher's primary role is merely to transfer textual knowledge, then AI is actually capable of doing so more quickly, extensively, and comprehensively. Therefore, cutting-edge pedagogical analysis highlights the urgency for Islamic Education teachers to transform from mere sources of knowledge into dynamic learning facilitators and moral mentors who guide students' souls. This shift by no means diminishes the importance of teachers; rather, it elevates the dignity of their profession to a higher and more essential level. Teachers no longer compete with machines in terms of data mastery but focus on developing humanistic and spiritual aspects, as well as contextualizing Islamic values areas beyond the reach of computer algorithms. This transformation of roles demands that teachers recognize that the essence of religious education is not merely cognitive development but the formation of a complete and meaningful human being (Mahesa, Hidayat, and Gusmaneli n.d.).

As facilitators, Islamic Education teachers in the age of AI are tasked with designing a learning ecosystem that encourages students to think critically, analytically, and reflectively about the various information they encounter (Hilalludin and Sugari 2026). When students

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can easily ask AI about fiqh or the interpretation of verses, teachers no longer need to spend hours simply dictating definitions or texts. Instead, teachers facilitate in-depth discussions to help students understand the context, distinguish between strong and weak opinions, and connect religious texts to the complexities of modern life (Arrahman 2025). Teachers create a safe and inclusive classroom environment where students can explore their doubts, ask questions about contemporary issues, and discuss how Islamic values are applied in addressing modern challenges, such as social media ethics or the psychological impact of technology. In this capacity, teachers act as a vital bridge connecting machine-generated textual knowledge with contextual understanding that is meaningful to students' daily lives. This facilitation also includes active guidance in verifying the accuracy of religious information online, which is often filled with biased, superficial, or even extreme content (Sofiani et al, 2025). In this way, Islamic Education teachers ensure that students' digital literacy extends beyond the technical ability to access technology; it is also accompanied by the ability to filter information using sound Islamic methodologies, so that they become independent learners who are not easily misled.

On the other hand, the role of Islamic Education teachers as moral mentors is becoming increasingly crucial and completely irreplaceable in the face of technological dominance. AI, no matter how sophisticated its algorithms may be, fundamentally lacks a heart, empathy, a soul, or spiritual awareness (Ali et al. 2025). Islamic religious education is, at its core, a process of transmitting values, instilling moral character, and purifying the soul (tazkiyatun nafs), all of which require deep emotional and spiritual interaction among people (Subaidi and Jahari 2023). As moral mentors, Islamic Education teachers serve as *uswah hasanah* or living examples who demonstrate how Islamic ethics are put into practice in daily life, rather than remaining mere theories stored in a computer database. Teachers build strong emotional bonds with students, listen to their concerns, provide spiritual motivation, and guide them when they face identity crises or psychological issues that cannot be resolved by machines. A personal touch, a sincere gaze, and the prayers offered by a teacher possess a transcendent energy capable of touching students' hearts and inspiring them to do good. In an era where students often feel isolated in the virtual world, the presence of a teacher as a moral mentor provides the psychological and spiritual anchor they desperately need. Teachers also help students navigate the moral dilemmas arising from technology use such

as the dangers of smartphone addiction or cyberbullying by guiding them to always feel watched over by God (*muraqabah*). This is the essence of character education, which can only be imparted through exemplary conduct and authentic human relationships (Hendriyanto, 2026).

Opportunities and Challenges of Artificial Intelligence in Islamic Education

The integration of artificial intelligence into Islamic Religious Education (IRE) opens up significant and revolutionary opportunities, particularly in terms of time efficiency and unlimited access to educational materials (Skiara et al, 2025). From an efficiency standpoint, AI can automate various processes related to lesson preparation and assessment, allowing Islamic Education teachers to allocate their time more effectively toward direct interaction and spiritual guidance for students. For educators, tasks ranging from developing teaching modules and creating test questions to analyzing learning outcomes can be completed in a matter of seconds—a leap in productivity that was previously unimaginable. On the other hand, accessibility presents a significant opportunity to democratize religious education. Students living in remote areas or with physical limitations can now access high-quality Islamic materials from renowned scholars and intellectuals through AI-based platforms. The availability of digital libraries, interactive tafsir apps, and chatbots capable of answering fiqh questions anytime and anywhere has broken down the geographical and temporal barriers that have long limited learning spaces. This flexibility in learning time allows students to explore the richness of Islamic heritage in accordance with the rhythm of their own lives. Academically, this ease of access not only enriches learning resources but also fosters students' independence in pursuing knowledge, which aligns with the Islamic principle of seeking knowledge throughout one's life (Lubis and Syahrial 2024). Thus, the efficiency and accessibility offered by AI lay a solid foundation for a more inclusive, responsive, and far-reaching PAI learning ecosystem.

In addition to efficiency and accessibility, the integration of AI also presents a golden opportunity to dramatically increase students' interest in and motivation to learn Islamic Education (Waluyo 2021). Until now, the stigma that Islamic Education is a rigid, boring subject filled with rote memorization has often dampened the enthusiasm of the younger generation. However, AI has the potential to shift this paradigm by presenting the material in an interactive, visual, and gamified way. Imagine students learning the history of Islamic

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civilization through AI-driven virtual reality simulations, or memorizing the Quran with an app that provides real-time voice feedback and visual rewards. This adaptive pedagogical approach addresses students' psychological needs, making them feel more valued and actively engaged in the learning process. When religious material is presented in language relevant to their world, accompanied by engaging animations and challenging quizzes, students' perception of Islamic Education will shift from an academic burden to a fulfilling spiritual need. This increased interest is crucial because, in Islamic educational theory, *ragbah* (a sense of love and interest) is the primary gateway for instilling values into the heart. If students feel happy and challenged, the internalization of moral and jurisprudential values will occur organically and deeply, not out of compulsion. Therefore, AI's ability to personalize the learning experience and make it more visually engaging and interactive is not merely a technological gimmick, but a powerful pedagogical strategy for ensuring the relevance of religious education amid the barrage of distractions from the digital world (Dewi 2024).

While offering a range of promising opportunities, the adoption of AI in religious education also presents serious challenges that must not be overlooked, particularly regarding data privacy and algorithmic bias. In practice, AI systems require large amounts of data to learn and provide personalized responses, including sensitive data on worship habits, personal questions regarding Islamic jurisprudence, and students' moral development. If cybersecurity infrastructure is inadequate, such data breaches could violate students' privacy and potentially be misused by irresponsible parties (Yamin et al, 2024). Even more concerning is the challenge of algorithmic bias. AI is trained using datasets available on the internet, which unfortunately often contain unverified, extreme, or biased religious information regarding specific schools of thought. If not strictly curated, AI may issue fatwas or interpretations that deviate from the principles of Islamic *wasathiyah* (moderation) and *rahmatan lil 'alamin*. Students who lack a strong scholarly foundation may accept AI's answers at face value as absolute truth (Muji & Khairunnisa, 2024). This risks inadvertently fostering a narrow, rigid, or even radical understanding of religion. Therefore, these technical and ethical challenges require strict oversight from religious scholars, education experts, and technology developers to ensure that the AI algorithms used in Islamic Education have undergone a rigorous sharia validation process, are free from sectarian bias, and fully comply

with personal data protection principles to preserve the sanctity and purity of students' religious understanding.

Another fundamental challenge, of a philosophical and sociological nature, is the potential erosion of humanistic and spiritual values in the transmission of religious knowledge, as well as the widening of the digital divide within society (Raisha 2025). In the tradition of Islamic education, the process of seeking knowledge is not merely viewed as a cognitive transfer, but also as a spiritual process involving *talaqqi* (direct interaction), *subbah* (fellowship), and the pursuit of *barakah* from a *kiai* or *ustaz*. When this interaction is entirely replaced by machines devoid of spirit and heart, there is concern that the essence of character education and the purification of the soul (*tazkiyatun nafs*) will lose its meaning. AI cannot shed tears while recounting the Prophet's biography, cannot sincerely pray for its students, and cannot offer a comforting embrace when a student is grieving. On the other hand, there is the very real challenge of the digital divide. Not all schools or students have equal access to advanced devices and stable internet connections, especially in underdeveloped, frontier, and remote areas (3T). If AI integration is forced without equitable infrastructure, this will actually exacerbate the disparity in the quality of religious education (Al Jumhuri, 2025). Students in urban areas will gain an even greater advantage through interactive and personalized Islamic Education, while students in rural areas will fall further behind. Therefore, policies on integrating AI into Islamic Education must be designed to be inclusive and equitable, ensuring that technology serves as a complement that enriches the spiritual dimension rather than as a substitute that undermines the humanistic aspect and that it is accessible to all children of the nation without exception (Maulidi, 2025).

CONCLUSION

The integration of Artificial Intelligence (AI) in Islamic Religious Education (IRE) represents a profound pedagogical transformation rather than a mere technological upgrade. This shift redefines the teacher's role from a primary knowledge transmitter to a facilitator of adaptive learning and an irreplaceable moral mentor (*uswah hasanah*). While AI introduces significant opportunities such as administrative efficiency, democratized accessibility, and enhanced student engagement it simultaneously presents critical challenges, including data privacy vulnerabilities, algorithmic bias, the erosion of traditional spiritual interactions (*talaqqi*), and the widening digital divide. Consequently, the successful adoption of AI in

Islamic education necessitates a balanced paradigm that harmonizes technological innovation with foundational Islamic ethical principles. Moving forward, it is imperative to prioritize educator digital literacy, enforce equitable technological infrastructure, and rigorously validate AI content to preserve religious moderation. Ultimately, AI must function as a complementary instrument that amplifies, rather than diminishes, the humanistic and spiritual essence of teaching, thereby fostering a progressive, inclusive, and spiritually grounded educational ecosystem for the digital generation.

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