



ARTIFICIAL INTELLIGENCE AND THE FUTURE OF ISLAMIC EDUCATION: OPPORTUNITIES, CHALLENGES, AND ETHICAL IMPLICATIONS

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Abstract:

The technological revolution driven by artificial intelligence (AI) has penetrated the realm of education, including Islamic educational institutions, presenting both strategic opportunities and multifaceted challenges that demand value-based responses grounded in Islamic principles. This study aims to map the strategic potential of AI, analyze barriers to its integration, and formulate an ethical framework based on *maqāṣid al-syarī'ah* and the concept of *maṣlaḥah* as normative guidance for responsible technology utilization in Islamic education. This research employs a qualitative approach through library research design, utilizing descriptive-interpretive content analysis of reputable academic sources published between 2021 and 2025. Findings reveal that AI offers significant potential for personalized learning, institutional administrative efficiency, and broader access to value-based Islamic education. Nevertheless, persistent challenges including digital infrastructure disparities, insufficient technological literacy among educators, and the threat of algorithmic bias remain considerable obstacles that require systematic resolution. From an ethical standpoint, AI utilization demands a robust normative foundation to prevent technology from displacing the spiritual values and character development that are central to Islamic education. This study concludes that AI integration must be implemented responsibly, strategically, and in alignment with the holistic objectives of Islamic education, ultimately nurturing a generation of Muslims who excel intellectually while remaining firmly grounded in spirituality and morality.

Keywords: *Artificial Intelligence; Islamic Education; Technology Ethics; Maqāṣid Al-Syarī'ah; Digital Transformation*

INTRODUCTION

A wave of technological revolution marked by the emergence of *Artificial Intelligence* (AI) has penetrated all sectors of human life, including the world of education. AI is not just a technical instrument, but has transformed into a disruptive force that fundamentally changes the way humans learn, teach, and organize knowledge (Saputra et al., 2026). In the context of Islamic education, the presence of AI opens up new horizons that are promising and demand deep vigilance. Emphasized that AI has developed into a revolutionary force in various industries, and interest in its potential application in the field of education continues to experience significant growth, especially in improving the accessibility and quality of learning based on Islamic values. The potential of

AI in the context of Islamic education encompasses various strategic dimensions that have not been fully explored academically. This technology is able to expand the Muslim community's access to quality learning resources, encourage personalization of the learning experience, and support the efficiency of the overall management of Islamic educational institutions (Razaq, 2026). However, AI integration also raises serious concerns, especially regarding data privacy, *Algorithmic Bias*, and cultural harmony.

The ethical aspect is a central issue that cannot be ignored in the discourse of AI and Islamic education (Wahid et al., 2022). The foundation of Islamic ethics that comes from *Squirṭsid al-syarī'ah* and concepts *andṣTheḥah* is considered relevant as a normative framework in evaluating the impact of technology on human life. A study on AI in Islamic education at Indonesian higher education institutions concluded that "the integration of AI in education poses significant ethical challenges, particularly around data privacy, algorithmic bias, and cultural alignment" (Khoirunnisa et al., 2023). This condition requires a strategic response from Islamic education stakeholders so that they do not just become consumers of technology without critical power.

The complexity of this problem encourages the urgency of comprehensive, systematic, and contextual studies. Mudrik et al. (2024) highlighting the various obstacles faced by the Muslim community in implementing AI in the field of education, especially in teaching Islamic values, while identifying the need for an approach *Systematic Literature Review* for thorough problem mapping. These findings reinforce the argument that the study of AI and Islamic education is not just an academic discourse, but an urgent need that has a direct impact on the future of Muslim generations (Aziz et al., 2024). Based on the background that has been described, this study formulates three main questions. First, what opportunities can be used by Islamic educational institutions in integrating *artificial intelligence* to improve the quality and accessibility of learning based on Islamic values? Second, what challenges do Islamic education face in the process of adopting and implementing AI technology, especially related to infrastructure, human resources, and value alignment? Third, how can the ethical implications of the use of AI in Islamic education be analyzed and responded to constructively through the framework of Islamic values, including the principles of *maqāṣid al-sharī'ah* and the concept of *maṣlaḥah*?

This research aims to systematically map the strategic opportunities offered by AI technology for the development of Islamic education in the digital era. Furthermore, this study intends to identify and analyze various challenges that arise in the process of AI integration in Islamic educational institutions, both from a technical and cultural perspective (Novita, 2025). Finally, this research aims to formulate an ethical framework based on Islamic values as a normative foundation in the development and utilization of AI that is responsible, sustainable, and in line with the mission of holistic Islamic education. Theoretically, the results of this research are expected to enrich the academic treasures in the field of contemporary Islamic education, especially in examining the relationship between modern technology and Islamic values in a critical and constructive manner (Khofsah, 2026). Practically, the findings of this study can be a reference for policy makers, managers of Islamic educational institutions, and educators in designing the right strategy to integrate AI without sacrificing the integrity of Islamic educational values and goals. Furthermore, this research is expected to contribute to the formation of an ethical discourse of AI with an Islamic perspective, so that the Muslim community is not only the object of global technological developments, but also

plays an active role as subjects who formulate the direction and limits of its use (Sain, 2026).

RESEARCH METHODS

This study is built on the foundation of a qualitative approach with a design *Library Research* or literature study, which is a research method that focuses on the excavation, collection, and analysis of relevant written sources in a systematic and in-depth manner. The choice of this approach is based on the characteristics of the study object which are conceptual, normative, and theoretical, so that it does not require the collection of primary data from the field. Fadli (2021) emphasizing that qualitative research is carried out through a design whose findings are not obtained through statistical procedures, but aims to reveal phenomena in a holistic-contextual manner, by utilizing researchers as key instruments in the process of data interpretation. It is this character that makes the qualitative approach most appropriate for examining complex issues such as the ethical implications and conceptual challenges of the integration of AI in Islamic education.

Data collection in this study was carried out through the search of various primary and secondary literature sources relevant to the study topic. These sources include articles from reputable scientific journals, academic reference books, reports of international institutions, and seminar proceedings that discuss themes *Artificial Intelligence*, Islamic education, technological ethics, and *Digital Transformation* in the context of Islam. Adlini et al. (2022) Explained that in qualitative research based on literature studies, data collection is carried out by searching, collecting, and reconstructing various sources such as books, journals, and pre-existing research, so as to produce a synthesis of knowledge that is comprehensive and structured. All sources used in this study are prioritized to be published in the range of 2021 to 2025, to ensure the relevance and up-to-date of the analyzed data.

Data collection instruments in research *Library Research* It is the researcher himself, who plays an active role in selecting, reading, recording, and classifying information from various literature sources. The source selection process is carried out based on the criteria of topic relevance, publisher credibility, and depth of analysis offered by each source. Ardiansyah et al. (2023) states that the success of an educational scientific research is highly determined by the accuracy of the data collection techniques and research instruments used, where in the qualitative approach, the researcher acts as the main instrument that actively determines the direction and focus of data mining. Therefore, the objectivity and consistency of the researcher in the data collection process are critical components that determine the quality of the findings of this study.

The data analysis technique used is content analysis (*Content Analysis*) which is descriptive-interpretive. Through this technique, the researcher identifies the main themes, argumentation patterns, and perspectives that emerge from the collected literature sources, then interprets them critically within the conceptual framework of the research. Studies on *SWOT analysis* integration of AI in Islamic education using qualitative-based methodologies *Library Research* shows that the descriptive-qualitative approach is able to produce an in-depth exploration of the implementation of AI in Islamic education, especially in examining its influence on the cognitive, affective, and psychomotor domains of students (Nirwana et al., 2025). The analysis process in this study is carried out in stages, starting from data reduction, data presentation, to drawing conclusions based on a thorough interpretation of the

literature that has been studied.

RESULTS AND DISCUSSION

Opportunities for Artificial Intelligence in Islamic Education

Technological developments *Artificial Intelligence* which is taking place rapidly has opened up a wide and strategic horizon of opportunities for Islamic educational institutions in improving the quality, efficiency, and relevance of learning in the midst of an increasingly rapid digital transformation flow. One of the most fundamental opportunities that AI offers is its ability to make *personalized learning*, which is a learning process that dynamically adjusts the content, methods, speed, and learning style to the individual needs of each student (Kamil et al., 2025). AI-based systems can automatically identify students' strengths and weaknesses, and then present the most appropriate material at the most appropriate time, resulting in significantly and measurable learning effectiveness. The integration of AI has been proven to contribute to the enhancement of critical thinking skills, character building, and the enrichment of the learning process effectively on a global scale, although its presence still requires the alignment between science and divine revelation as the epistemological foundation of Islamic education that cannot be compromised (Naya et al., 2025).

The next AI opportunity is very felt in the realm of Islamic Religious Education learning evaluation and assessment. Variety *Tools AI* such as Google Site, Quizizz, and ChatGPT have proven to have real potential as an instrument for creating innovative, interactive, and accessible PAI learning media for all levels of educators. Quizizz can function as an interactive quiz medium with creative features such as *Live Ranking*, while ChatGPT is useful as a tool *Brainstorming* Ideas and Acquisitions *Feedback* for students, although it still requires firmness and supervision from teachers so that they are not abused in the learning process (Putri et al., 2024). Availability of a variety *Tools AI*, which can be accessed for free, is a very meaningful transformative opportunity, especially for Islamic educational institutions that have often been constrained by budget constraints in the development of high-quality learning media and the latest technology-based learning media.

The next strategic opportunity of AI includes the managerial and administrative dimensions of Islamic educational institutions as a whole (Z. H. Zain, 2026). Research in Islamic higher education institutions shows that AI is able to improve learning efficiency while providing real convenience and boosting the productivity of education personnel in the field of administration. Along with these huge opportunities, AI also brings the potential for administrative automation that can fundamentally change institutional work patterns (Alhajj et al., 2024). This condition requires Islamic educational institutions to proactively remap the role and function of each organizational element so as not to be left behind in this inevitable wave of transformation. Dimensions *Multimodal AI* also opens up promising new opportunities in expanding the reach and depth of Islamic education beyond geographical boundaries and time constraints. Approach *multimodal AI* that integrates auditory, visual, kinesthetic, and linguistic modalities offers transformative potential in reshaping educational paradigms, particularly through the ability to *Artificial General Intelligence* (AGI) in strengthening teaching effectiveness, filling existing methodological gaps, and supporting more adaptive and sophisticated knowledge representation and processing (Lee et al., 2025). These opportunities collectively position AI as a potential strategic partner for Islamic education in addressing the evolving complexity of the challenges of the Society

5.0 era.

The advancement of *artificial intelligence* does not only stop at the technical level, but has touched a deeper pedagogical dimension, especially in the context of Islamic educational institutions that have been synonymous with traditional and conventional approaches. One of the opportunities that has not received much attention is AI's ability to facilitate Arabic learning in an adaptive and contextual manner (Haisuma et al., 2026). Natural *language processing* (NLP) systems embedded in various modern AI platforms are able to detect grammatical errors, train pronunciation, and provide instant feedback to Arabic language learners, which is an important foundation for understanding the Qur'an and classical Islamic literature more authentically and deeply. Furthermore, the opportunity for AI is also evident in the development of an Islamic education curriculum that is responsive to the needs of the times. By utilizing *machine learning* capabilities, Islamic educational institutions can analyze trends in competency needs in the world of work based on Islamic values, then adjust the curriculum content periodically and based on accurate data (Holidi et al., 2026). This approach allows the Islamic education curriculum to not only be oriented towards mastery of religious texts, but also to integrate the 21st century skills needed by today's generation of Muslims.

The use of AI in the context of digital da'wah also opens up a new dimension that is very relevant for Islamic educational institutions. Through *AI-based content recommendation* technology, quality Islamic material can be distributed more precisely to the audience in need, beyond geographical and demographic boundaries that have been obstacles to the spread of Islamic knowledge. This condition makes Islamic educational institutions not only a center for formal learning, but also a digital *knowledge sharing* ecosystem that has a wide influence in society. Computer vision-based AI technology also offers significant opportunities in learning worship practices, such as verifying prayer movements, tajweed, and other religious practices that have so far only been able to be assessed directly by teachers. This kind of innovation has the potential to expand the reach of Islamic education to Muslim communities living in remote areas, where the availability of competent religious teachers is still very limited. Thus, AI is not just a technical tool, but a bridge that brings access to quality Islamic education closer to all levels of Muslim society without discrimination (Ni'am, 2025). In addition, collaboration opportunities between Islamic educational institutions through AI-based platforms open up unprecedented synergy space. Various madrasas, Islamic boarding schools, and Islamic universities can share learning resources, exchange curriculum modules, and build a *community of practice* that is digitally connected and intelligently managed by AI systems. This kind of collaborative ecosystem not only improves resource efficiency, but also strengthens intellectual and spiritual cohesion among Islamic educational institutions that have tended to operate separately and less coordinated with each other.

Challenges of Integrating Artificial Intelligence in Islamic Education

Behind the vast opportunities offered, the integration of AI in Islamic education is also faced with real challenges that are multidimensional and cannot be simplified just like that. The most fundamental challenge is related to the inequality of technological infrastructure readiness that is still uneven in various regions. Many madrasas and Islamic higher education institutions still face serious limitations in digital readiness, unclear ethical guidelines in the use

of AI, and uneven pedagogical adaptation between Islamic education units in Indonesia and other regions (Hermawan et al., 2025). This gap in access to technology has created a sharp disparity in the quality of learning between Islamic educational institutions in urban and rural areas, which ultimately has the potential to exacerbate structural and systemic inequality in the quality of education in the long run. The next challenge touches on the aspect of readiness and competence of human resources which are the spearhead of AI implementation in Islamic educational institutions. Teachers are no longer enough to only play the role of material presenters, but are required to transform into facilitators, learning designers, and drivers of innovation who are able to harmoniously integrate Islamic values with technological advances to ensure that Islamic education remains relevant and competitive in the ever-changing digital era (I. A. Zain et al., 2025). This readiness cannot be built instantly, but requires a structured, sustainable, and contextual training program in accordance with the specific needs of Islamic educational institutions.

Model application *blended learning* which combines face-to-face and online learning as one of the manifestations of AI integration in Islamic education also faces its own obstacles that are not light. One of the biggest challenges for educational institutions in implementing this model is the absence of an adequate and quality learning management system, even though the existence of such a system is one of the main keys to the success of the learning model *Hybrid* effective and efficient (Halid, 2022). Without a solid learning management infrastructure, the potential of AI to support adaptive and inclusive learning will not be optimally realized in the Islamic education environment. Another challenge that is no less crucial relates to the negative impact of AI on the character and mentality of students that must be seriously anticipated. AI used without adequate control and guidance has a detrimental impact on students, which is characterized by the emergence of laziness, a tendency to simplify tasks, and an increasingly worrying over-reliance on technology. The weaknesses of AI include its inability to understand the cultural context and spirituality in depth, while the challenge aspects include the increasingly limited direct contact of teachers and the threat to the depth of moral education that is the spirit of Islamic education (Faizudin et al., 2025). This condition is directly contrary to the main mission of Islamic education which places the formation of noble morals and spiritual intelligence as the highest goal that cannot be replaced by any sophisticated technology.

Barriers to AI adoption in Islamic education are also systemic in terms of institutions and policies. Challenges reported include limited infrastructure, lack of available professional training, and lack of clear institutional policies on responsible governance and use of AI within Islamic educational institutions (Al-Saad et al., 2026). This policy vacuum creates a gray space that has the potential to be abused and hinders AI integration efforts that are targeted, structured, and in line with Islamic values. The complexity of the challenges of AI integration in Islamic education is not sufficiently understood only from a technical perspective, but must be examined more comprehensively from a more basic epistemological and cultural perspective. One of the challenges that often goes unnoticed is the internal resistance coming from senior educators who have the view that the presence of AI has the potential to erode the scientific authority of scholars and teachers in the process of transmitting Islamic knowledge. In the tradition of Islamic education, the relationship between teacher and student is not just the transfer of information, but a spiritual bond that contains the dimension of exemplary and *tarbiyah* that

cannot be reproduced by any sophisticated algorithm.

Another epistemological challenge has to do with the fundamental question of the source and validity of knowledge in Islam. When AI generates religious content through statistical computational processes, critical questions arise regarding the authenticity and reliability of such content from an Islamic scientific perspective. The potential for errors in the interpretation of Islamic texts produced by AI systems without the supervision of competent scholars can lead to distortions of religious understanding that have a serious impact on the quality and depth of Islamic education (Rofik & Mudarris, 2024). From a psychological perspective, excessive reliance on AI in the learning process has the potential to weaken students' *critical thinking* skills and independent reasoning. When the answer to each question is instantly available through an AI platform, the intrinsic motivation to think deeply, reflect, and conduct intellectual exploration independently risks significant degradation. This condition is in direct contradiction to the Islamic intellectual tradition which highly values the process of *ijtihad*, deep contemplation, and perseverance in seeking knowledge as a form of worship of high value.

Challenges in terms of regulation and governance are also increasingly urgent to be overcome immediately. The absence of national and international standards governing the use of AI specifically within Islamic educational institutions creates a dangerous legal vacuum. Various Islamic educational institutions tend to adopt AI technology on *an ad hoc basis* without clear guidelines, so the risk of misuse of student data, privacy violations, and the distribution of content that is not in accordance with Islamic values becomes a real threat and difficult to control. Furthermore, structural financing challenges are also significant obstacles that cannot be ignored. Most Islamic educational institutions, especially private Islamic boarding schools and madrasas, rely on very limited funding sources for their operations. Investing in AI infrastructure that includes hardware, software licensing, high-speed internet connections, as well as ongoing training programs requires budget allocations that far exceed the financial capacity of the majority of such institutions. Without subsidy policies or strategic partnerships from the government and the private sector, the digital divide between financially established and non-Islamic educational institutions will continue to widen uncontrollably.

Ethical Implications of the Use of Artificial Intelligence in Islamic Education

The ethical dimension is the most fundamental issue that determines the direction and quality of the use of AI in Islamic education in the long term. The presence of AI is not just an ordinary technological phenomenon, but a moral, spiritual, and epistemological challenge that must be responded to wisely and planned by all stakeholders of Islamic education (Rahman & Hasanah, 2025). The Muslim community, especially educators and thinkers, should not be passive spectators in this revolution, but should instead appear as agents of change that actively direct the development of technology in accordance with Islamic values, by using AI as a tool *Da'wah* and the formation of character within a solid and unshakable ethical and theological framework (Elihami, 2025).

One of the most pressing ethical implications concerns academic integrity and information accuracy in AI-based learning. Usage *Chatbot* AI-based initiatives such as ChatGPT in the context of education give rise to an interesting positive shift in user perception, but at the same time raise serious concerns about its effectiveness *Prompting* and the accuracy of the information

produced, thus encouraging the need for a *AI learning competence* as a new competency framework that must be formally developed and integrated in the pedagogical design of future Islamic education (Arndt, 2024). Without this competence, students are vulnerable to becoming consumers of uncritical information and are easily exposed to content that is not in harmony with Islamic values. The next ethical implications concern algorithmic justice, technological inclusivity, and privacy protection in the AI-based education ecosystem. AI has evolved from a simple rule-based system to an adaptive solution driven by massive amounts of data, but this evolution raises serious concerns about digital inequalities, data privacy concerns, *Algorithmic Bias*, as well as over-reliance on AI that must be anticipated through comprehensive regulation and in favor of human values and social justice (Ali, 2025). In the context of Islamic education, undetected algorithmic biases have the potential to erode the nuances of Islamic culture and values that are the spirit of the entire learning process and the formation of students' character.

Evaluative ethical implications also need to receive deep attention, especially regarding the limitations of AI in addressing the spiritual dimension that is the hallmark of Islamic education. Various persistent challenges in AI-based evaluation include AI's inherent limitations in assessing learners' spiritual dimensions, potential *Algorithmic Bias* that are difficult to detect, as well as the increasingly complex ethical and data privacy issues of the *Big Data* (Rahmawati et al., 2025). This fundamental limitation confirms that AI must be positioned as a tool that reinforces, not replaces, the role of teachers in a holistic and equitable assessment process.

At the most fundamental level, the acceptance and ethical use of AI requires the readiness of well-built attitudes and competencies throughout the Islamic education ecosystem. The acceptance of AI technology among Islamic studies educators is significantly influenced by the perception of usability (*perceived usefulness*) and the perception of ease of use (*perceived ease of use*), which suggests that simplifying the interface and user experience is a crucial factor in driving inclusive and responsible AI adoption (Arifa, 2025). By referring to the results of research that reveal that AI is able to strengthen cognitive evaluation through data analysis *real-time* and developing more comprehensive affective and psychomotor assessments, the most strategic ethical implications are the need for integrated policies, ongoing and contextual educator training, and curriculum reforms that explicitly and consistently align the use of AI with the principles of the Qur'an, *Squrṭṣid al-syarī'ah*, and the holistic goal of Islamic education to produce a generation of Muslims who are technologically intelligent and solid in their spirituality, morality, and Islamic identity.

The study of the ethical implications of AI in Islamic education demands an analytical framework that goes beyond the secular Western technological ethical perspective, towards an ethical paradigm rooted in the Islamic worldview in its entirety and comprehensively. The concept *of caliphate* in Islam places humans as trustees on earth who are fully responsible for every decision and action, including in the development and utilization of technology. In this framework, the developers of AI systems with an Islamic perspective are required to not only pursue functional efficiency, but also ensure that every algorithm developed reflects the values of justice, honesty, and the benefit of the ummah as a whole.

The ethical implications related to the concept *of trust* in Islam are also very relevant in the context of managing student data in Islamic educational institutions. The data collected by the AI system from students' learning

activities is a mandate that must be kept confidential and must not be exploited for commercial purposes that are contrary to Islamic values. This ethical principle requires Islamic educational institutions to establish data protection policies that are based not only on technical regulations, but also on Islamic moral values that place the honor and privacy of individuals as sacred and inviolable. Another ethical dimension is related to moral responsibility in preventing the occurrence of *digital colonialism* in Islamic education. The dominance of AI platforms developed by tech corporations from Western countries has the potential to bring with it cultural values and perspectives that are not always aligned with the Islamic worldview. The dependence of Islamic educational institutions on these platforms without the development of alternative technologies with an Islamic perspective can become a new form of intellectual colonialism that threatens the epistemological autonomy of Muslims in the digital age.

In the context of *maqāṣid al-syarī'ah*, the use of AI must be consistently directed at the protection of five fundamental aspects of human life, namely the protection of religion (*hifz al-din*), the soul (*hifz al-nafs*), reason (*hifz al-'aql*), heredity (*hifz al-nasl*), and property (*hifz al-mal*). Any implementation of AI in Islamic education must first be tested against these five indicators to ensure that the resulting benefits are truly in line with the goals of the sharia comprehensively, and not necessarily undermine any of these essential aspects. Finally, the most long-term ethical implications have to do with the formation of Muslim identity in the digital age. The generation of learners who grow up in an AI-based learning ecosystem needs to be equipped with *strong Islamic digital literacy*, which is the ability to critically evaluate every AI content, algorithm, and system from the perspective of Islamic values. These competencies will not be formed automatically, but rather require a deliberate, structured, and consistent curriculum design that places Islamic ethics as the main compass in navigating this increasingly complex and challenging digital life.

CONCLUSION

This study confirms that *artificial intelligence* brings transformative potential as well as complex challenges for the future of Islamic education. On the one hand, this technology opens up real opportunities in the form of personalization of learning, efficiency of institutional management, and expanded access to educational resources based on Islamic values. On the other hand, various structural barriers such as infrastructure inequality, low digital literacy of educators, and vulnerability to *algorithmic bias* are still significant obstacles. In the ethical dimension, the integration of AI requires a solid normative foundation sourced from *maqāṣid al-sharī'ah* and the principles of *maṣlahah*, so that this technology can be used responsibly without sacrificing the integrity of Islamic educational values and goals.

Based on the findings of this study, several recommendations need to be considered by Islamic education stakeholders. First, it is necessary to develop comprehensive institutional policies guided by Islamic values as a reference for the governance of the use of AI. Second, *digital literacy training programs* for educators need to be designed in a sustainable and contextual manner so that the technology adoption process is inclusive. Third, further research needs to be directed at the development of an operational and measurable AI ethics framework based on an Islamic perspective. This study has limitations in the scope of literature sources that focus on the range 2021–2025, so field-based empirical research is highly recommended to enrich the validity of the findings.

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