

Utilizing Generative AI in Islamic Religious Education Learning: Opportunities and Challenges in the Digital Era

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Abstract

The development of digital technology has brought significant changes to the world of education, including Islamic Religious Education (PAI). This study aims to analyze the use of Generative Artificial Intelligence (AI) in Islamic Religious Education (PAI) learning in the digital era and identify opportunities and challenges that arise in its use. The study used a qualitative approach with a library research method through analysis of various scientific journal articles and relevant academic sources, especially publications from the last five years. The results of the study indicate that Generative AI can be used to help provide information, understand PAI material, develop teaching materials, increase learning interactivity, and support the efficiency of teacher and student activities. On the other hand, its use faces challenges such as the accuracy and validity of religious information, dependence on technology, academic integrity, digital literacy, and the need for teacher supervision. The study concludes that Generative AI has the potential to be a flexible and interactive PAI learning tool, but its use must be carried out critically, selectively, and responsibly, while still positioning teachers as directors and validators of religious information.

Keywords

Artificial Intelligence; Digital Technology; Generative AI; Islamic Religious Education; Learning



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INTRODUCTION

The development of digital technology has brought significant changes to the world of education, including Islamic Religious Education (PAI), particularly with the advent of Generative Artificial Intelligence (AI), which is capable of generating text, providing explanations, compiling materials, answering questions, and supporting various learning activities quickly and interactively. The use of Generative AI in PAI learning provides opportunities for teachers and students to access learning resources more easily, develop learning materials, enhance learning interactions, and support more flexible and personalized learning (Udhma & Burhanuddin, 2025). However, the use of this technology also raises various issues, particularly those related to the accuracy and validity of religious information, the potential dependence of students on AI, academic integrity, digital literacy skills, and the reduction of independent thinking processes if the technology is used without teacher

supervision and guidance. These issues are becoming increasingly important in Islamic Religious Education (PAI) learning because the material delivered is not only related to knowledge, but also concerns values, morals, ethics, and religious understanding that require accountable sources. Therefore, a study is needed that specifically analyzes the use of Generative AI in Islamic Religious Education learning by considering the opportunities that can be utilized as well as the challenges that must be anticipated so that its use can support the learning process effectively, critically, ethically, and remain in line with the values of Islamic Religious Education.

Theoretically, the use of Generative AI in education can be understood from the perspective of learning technology, which positions technology as a tool to support the learning process, not as a substitute for the role of educators. Generative AI enables more flexible learning through rapid explanations, idea development, material development, examples, and interactive dialogue tailored to students' needs. In Islamic education, this technology can provide opportunities for more personalized and adaptive learning, but must remain under the control of teachers through verification, guidance, and reinforcement of Islamic values. AI in Islamic education has the potential to enhance understanding, motivation, critical thinking, creativity, and learning efficiency, but also raises ethical issues, privacy concerns, changes in the role of teachers, and the need for AI use to remain aligned with Islamic principles (Muis et al., 2025). Thus, the basis of this research does not solely view Generative AI based on its technological benefits, but also considers pedagogical suitability, the validity of religious information, academic responsibility, and the role of teachers in guiding its use.

Previous research shows that the use of Generative AI in Islamic Religious Education has provided various opportunities for the learning process. Suryanto et al., (2025) found that ChatGPT can accelerate access to information, provide a more personalized learning experience, provide adaptive instruction, and assist teachers in planning and evaluating learning, although there are still issues regarding the authenticity and accuracy of religious information that require validation. Hayati, (2025) shows that ChatGPT can play a role as a learning assistant for Islamic Education in Madrasah Ibtidaiyah in supporting the understanding of Islamic concepts. (Andari et al., 2025) found that AI has the potential to increase the effectiveness and innovation of Islamic education, but its implementation faces challenges in terms of user readiness, digital competence, and ethical issues. Rahmawati & Zuliani, 2025) shows that the use of ChatGPT in Islamic Religious Education learning can support students' critical thinking and moral reasoning skills, while (Mahani et al., 2025) Studies have shown that AI can be used to support critical thinking skills in Islamic Religious Education (PAI) learning through various learning activities. These studies demonstrate that Generative AI has potential as a supporting technology for Islamic Religious Education (PAI) learning, particularly in providing information, aiding understanding of material, enhancing interactivity, supporting critical thinking, and improving learning efficiency.

Although previous research has made important contributions, there are still research gaps that require further study. Previous studies have tended to examine specific benefits or impacts of AI use, while studies specifically addressing the use of Generative AI, pedagogical opportunities, and challenges in Islamic Religious Education (PAI) learning are limited. The novelty of this research lies in its more comprehensive focus on the use of Generative AI in Islamic Religious Education (PAI) learning, with opportunities and challenges as its two primary focuses. The opportunities examined include ease of access to information, assistance in understanding material, interactivity, and learning efficiency. Challenges include the accuracy of religious information, dependence on technology, academic integrity, digital literacy, and the role of teachers in supervising and validating AI use. With this perspective, this research not only views Generative AI as a technological tool but also examines how this technology can be utilized effectively, critically, ethically, and in accordance with the characteristics and values of Islamic Religious Education.

This research aims to analyze the use of Generative AI in Islamic Religious Education (PAI) learning in the digital era and to analyze the opportunities and challenges that arise from its use. Through this research, it is hoped to gain a more comprehensive understanding of Generative AI's potential as a supporter of Islamic Religious Education (PAI) learning, as well as the various challenges that must be addressed to ensure its use remains effective, critical, ethical, and in line with the values of Islamic Religious Education.

METHODS

This study uses a qualitative approach with a library research method. This method was chosen because the research focuses on the analysis and synthesis of various literature discussing the use of Generative Artificial Intelligence (AI) in Islamic Religious Education (PAI) learning. The research data sources include scientific journal articles, books, proceedings, and academic documents relevant to the research topic. The literature used was prioritized from publications within the last five years, particularly research discussing Generative AI, ChatGPT, artificial intelligence in education, and its implementation in PAI learning. The literature was selected based on its relevance to the research focus, the credibility of the sources, and its relationship to the opportunities and challenges of using Generative AI in Islamic education.

Data collection was conducted through a literature search in various scientific databases using keywords such as "Generative AI in Islamic Religious Education," "Artificial Intelligence in Islamic Religious Education Learning," "ChatGPT in Islamic Education," "Generative AI in Islamic Education," and "AI in Islamic Religious Education Learning." The literature found was then selected based on the title, abstract, content relevance, year of publication, and source quality. Literature that was not directly related to the research focus or had inadequate discussion was excluded from the analysis. The selected data was then classified based on the main themes, namely the forms of Generative AI utilization,

opportunities for use in Islamic Religious Education learning, and challenges related to information accuracy, ethics, academic integrity, digital literacy, and the role of teachers.

Data analysis was conducted descriptively and analytically through several stages: identification, reduction, categorization, interpretation, and synthesis of information obtained from various sources. Each previous research result was compared to identify similarities, differences, trends, and limitations of the research that had been conducted. Furthermore, the study results were synthesized to gain a more comprehensive understanding of the opportunities and challenges of utilizing Generative AI in Islamic Religious Education (PAI) learning. This analysis was also used to identify research gaps and formulate research innovations, so that the results of the literature review not only provide an overview of the development of Generative AI use but also produce academic arguments regarding the effective, critical, ethical use of this technology, and in accordance with the values of Islamic Religious Education.

RESULTS AND DISCUSSION

Results

Utilization of Generative AI in Islamic Religious Education Learning

Literature studies show that Generative AI has been utilized as a supporting technology in Islamic Religious Education (PAI) learning, particularly through conversation-based applications such as ChatGPT. Its use is no longer limited to information retrieval, but has evolved into a tool to assist students in understanding material, formulating questions, providing alternative explanations, creating summaries, developing learning ideas, and assisting students in exploring Islamic material. In the context of PAI learning, Generative AI can be used to provide initial explanations regarding the Qur'an, Hadith, Aqidah Akhlak, Jurisprudence, and Islamic Cultural History. Research by Muttaqin (2023) shows that ChatGPT can help provide fast information access, a more personalized learning experience, adaptive instruction, and support teachers in preparing lessons. The findings of Hasan et al. (2023) also show that ChatGPT can be used as an Islamic Education learning assistant to help students understand Islamic concepts. Based on these findings, Generative AI can be positioned as a learning aid, not as a substitute for teachers, because the Islamic Education learning process still requires direction, role models, clarification, and value development from educators.

The use of Generative AI is also evident in the provision of more flexible learning resources and materials. Students can ask questions tailored to their level of understanding and receive responses relatively quickly. This allows for more individualized learning, as students can repeat questions, request different examples, or request explanations in simpler language. In Islamic Religious Education (PAI) learning, these characteristics can assist students when confronted with religious concepts that are considered abstract or require further explanation. Teachers can also use Generative AI to gain inspiration in developing materials, discussion questions, exercises, case studies, and designing learning activities. Thus,

the use of Generative AI is not limited to students but can also support teachers in preparing lessons. However, such use still requires teachers' ability to determine learning objectives and adapt AI output to the characteristics of the PAI material so that the technology truly supports learning.

The study also shows that Generative AI can be used as an interactive medium and learning companion. The characteristics of generative AI, which enable direct conversations, provide a different learning experience compared to conventional learning resources. Students can develop follow-up questions based on the answers obtained, enabling a more dialogical learning process. In Islamic Religious Education (PAI) learning, teachers can utilize this pattern to encourage students to discuss religious issues, compare opinions, analyze cases, and develop arguments. Research by Salim and Habibi (2025), for example, shows that the use of ChatGPT in Islamic Religious Education (PAI) learning can support critical thinking and moral reasoning skills. These findings demonstrate that Generative AI has the potential to be used not simply as an answer-providing machine, but as a stimulus to develop students' thinking processes. With proper guidance, students can be asked to critique AI answers, examine sources, and reconstruct answers based on credible Islamic references.

In addition to assisting students, Generative AI also has the potential to support the pedagogical work of Islamic Religious Education (PAI) teachers. Based on previous research, AI technology can be used to help formulate learning questions, provide alternative learning activities, create case studies, develop discussion materials, and provide evaluation ideas. This utilization can help reduce some of the technical workload of teachers, allowing them to direct more of their time and attention to activities with higher pedagogical value, such as guiding students, providing feedback, developing character, and creating learning interactions. In this context, Generative AI functions as a teaching assistant, assisting teachers in certain tasks but not taking over their professional responsibilities. Teachers remain central to determining the accuracy of the material, learning objectives, and learning strategies, as well as the appropriateness of AI use to student characteristics and PAI values.

The use of Generative AI in Islamic Religious Education (PAI) learning also demonstrates a shift in learning patterns from simply receiving information to more exploratory learning activities. Students can use AI to obtain initial explanations, then be directed to seek comparative sources from the Quran, Hadith, textbooks, religious books, and other academic sources. This pattern can make AI a starting point in the learning process, rather than the sole source of truth. In Islamic Religious Education (PAI) learning, this approach is crucial because information related to religious issues requires careful verification and interpretation. Thus, the use of Generative AI can be directed toward developing learning habits that involve asking questions, seeking information, comparing sources, verifying, and drawing conclusions. This pattern of utilization also demonstrates that the success of Generative AI is highly dependent on teachers' ability to design learning activities that place technology as part of students' thinking processes.

Overall, the literature review results indicate that the use of Generative AI in Islamic Religious Education (PAI) learning encompasses three main functions: as an initial source of information, a learning interaction companion, and a teacher aid in preparing lessons. This technology facilitates information acquisition, simplifies explanations, develops learning materials, and creates a more interactive learning experience. However, this utilization does not imply that AI can replace Islamic Religious Education (PAI) teachers. Rather, the findings suggest that the teacher's role is becoming increasingly important as a director, information validator, learning facilitator, and fosterer of Islamic values. Therefore, the most relevant utilization pattern is collaboration between teachers, students, and Generative AI, with the teacher remaining the primary controller of the learning process. This utilization of Generative AI can contribute to more flexible and adaptive PAI learning without eliminating the pedagogical dimension and religious values.

Opportunities and Challenges of Utilizing Generative AI in Islamic Religious Education Learning

Literature reviews indicate that the primary opportunity for utilizing Generative AI in Islamic Religious Education (PAI) learning lies in easy access to information and increased learning flexibility. Generative AI allows students to quickly obtain explanations of material and can tailor questions based on their learning needs. This can be helpful for students with varying levels of understanding, as they can request repeated explanations with varying formats and levels of difficulty. For Islamic Religious Education (PAI) teachers, this technology can be used to enrich the source of ideas for developing learning materials and activities. Research by Muttaqin (2023) demonstrates the benefits of ChatGPT in providing access to information and a more personalized learning experience, while research by Hasan et al. (2023) demonstrates its potential as an Islamic Education learning assistant. These findings demonstrate that Generative AI has the potential to support more flexible learning, especially when used as a complement to learning resources already provided by teachers.

The next opportunity is to increase student interactivity and engagement in the Islamic Religious Education (PAI) learning process. Unlike one-way learning resources, Generative AI allows students to engage in continuous question-and-answer-based communication. Students can request clarification, ask follow-up questions, request examples, or develop a problem based on previous responses. This potential can be leveraged to create more active learning, particularly in materials requiring discussion, analysis, and argumentation. Salim and Habibi's (2025) findings regarding ChatGPT's support for critical thinking and moral reasoning indicate that AI can be used as a stimulus to develop students' thinking processes. With appropriate learning design, Islamic Religious Education (PAI) teachers can guide students not only to accept AI answers but also to evaluate those answers and connect them to relevant Islamic sources.

Generative AI also offers opportunities to improve the efficiency of Islamic Religious Education teachers' work. Teachers can utilize technology to gain inspiration in developing teaching materials, questions, assignments, learning scenarios, and discussion materials. This

capability can help teachers save time on technical and repetitive tasks. Baiquni et al. (2025) demonstrated that the use of ChatGPT can support learning productivity in the context of Islamic Education, while various other studies have shown that AI can assist with lesson preparation activities. However, the resulting efficiency does not mean that teachers can hand over the entire planning process to AI. Teachers must still select, edit, and adjust the results generated by AI. Thus, the opportunity for efficiency will be beneficial if accompanied by teachers' digital competence and pedagogical skills in controlling the use of technology.

Despite these opportunities, the study revealed serious challenges related to the accuracy and validity of religious information. Generative AI does not always produce correct answers because the system can generate information that appears convincing but lacks a strong basis or is inconsistent with authoritative religious sources. This issue becomes even more sensitive in Islamic Religious Education (PAI) learning because religious material relates to beliefs, worship, laws, morals, and values, which require reliable sources. Muttaqin's (2023) research specifically emphasized the issue of authenticity and accuracy of information when ChatGPT is used in the context of Islamic education. Therefore, Generative AI answers cannot be directly positioned as a source of truth. Islamic Religious Education teachers need to verify the information generated by AI by referring to the Quran, Hadith, credible Islamic books or literature, textbooks, and other credible academic sources. This accuracy challenge also reinforces the importance of the teacher's role as information validator in AI-based learning.

Other challenges relate to reliance on technology, academic integrity, and students' independent thinking skills. The ease of obtaining answers through Generative AI can lead students to use technology as a shortcut to completing assignments without understanding the thought processes behind those answers. Uncontrolled use also has the potential to reduce motivation to read original sources, discuss, analyze, and construct arguments independently. In an academic context, the use of AI without transparency can raise integrity issues because AI-generated assignments can be perceived as the work of students. Therefore, the use of Generative AI requires clear usage rules, including an emphasis on AI as a learning aid, not a substitute for students' thinking processes. Teachers need to design assignments that encourage analysis, reflection, personal experience, and the use of verifiable sources so that students remain accountable for their learning process and outcomes.

The final challenge relates to digital literacy readiness, the ethical use of AI, and the changing role of Islamic Religious Education (PAI) teachers. Effective use of Generative AI is not simply about the ability to operate applications; it also requires the ability to formulate questions, evaluate answers, verify sources, recognize inaccurate information, and use technology responsibly. Achruh et al. (2024) demonstrated that user readiness, digital competence, and ethical issues are crucial to the challenges of implementing AI in Islamic education. Therefore, teachers and students need adequate AI literacy to understand the limitations of the technology and use it appropriately. Based on the overall results of the study, the opportunities for Generative AI in Islamic Religious Education (PAI) learning are significant in terms of information access, flexibility, interactivity, and efficiency. However,

these opportunities must be balanced with controls regarding information accuracy, technological dependency, academic integrity, and ethical use. Therefore, the ideal use of Generative AI in Islamic Religious Education (PAI) learning is directed and under the guidance of teachers, so that technology can support learning without eliminating the role of humans, critical thinking processes, and the values of Islamic Religious Education.

Discussion

The research findings indicate that Generative Artificial Intelligence (AI) has an increasingly important position as a supporting technology in Islamic Religious Education (PAI) learning, particularly in providing information, assisting in understanding the material, and creating more flexible learning interactions. This finding aligns with the view of learning technology, which positions technology not as a substitute for educators, but as an instrument that can strengthen the learning process when used in accordance with pedagogical objectives. From a constructivist learning perspective, students not only receive knowledge but also construct their understanding through the process of asking questions, exploring, comparing, and interpreting information. The characteristics of Generative AI, which enable direct dialogue, provide space for this process. The research findings (Yasmar & Amalia, 2024) supports these findings by showing that ChatGPT can provide rapid information access, a more personalized learning experience, and adaptive instruction in Islamic Education. (Ramadhani & Yemmardotillah, 2026) found that ChatGPT can function as a learning assistant to help students understand Islamic concepts. Thus, this research confirms previous studies that Generative AI has the potential to act as a learning assistant, expanding students' access to learning resources and explanations. However, in Islamic Religious Education (PAI) learning, this function must be positioned as a supporting tool, as the religious education process is not only oriented towards mastering knowledge but also the formation of attitudes, morals, and Islamic values, which require teacher interaction and role models.

From a pedagogical perspective, the research results show that Generative AI can provide opportunities for more interactive, adaptive, and learner-centered learning. This finding can be linked to the concept of learner-centered learning, where students are given the opportunity to develop questions, explore information, and build their understanding based on their learning needs. Generative AI allows students to receive explanations with adjustable levels of complexity, thus supporting individual learning. These results align with (Darmawan et al., 2025) which found that the use of ChatGPT in Islamic Religious Education (PAI) learning can support students' critical thinking and moral reasoning skills. However, this study provides a broader perspective because it not only looks at AI in terms of improving critical thinking skills but also examines how the technology can be used to support the learning process. (Vernanda et al., 2025) The findings, which demonstrate that AI can be used to support analytical and critical thinking activities in Islamic Religious Education (PAI) learning, also reinforce the findings of this study. This comparison demonstrates that the effectiveness of Generative AI is not solely determined by the sophistication of the technology, but also by the

learning design created by the teacher. When AI is used solely to provide answers, the learning process tends to be passive. However, when used as a stimulus for questions, discussion material, and verification objects, the technology can encourage students to think more critically and actively.

The research also shows that Generative AI can improve the efficiency of teacher and student activities, particularly in providing learning materials, formulating questions, developing learning ideas, and searching for alternative explanations. These findings align with research(Thohir et al., 2023)This study demonstrates that ChatGPT can support the learning productivity of Islamic Education students. From an educational technology perspective, efficiency is one of the primary benefits of using technology when it reduces technical work and allows educators more space to carry out more complex pedagogical functions. However, the results of this study indicate that efficiency should not be understood as diminishing the role of teachers. In fact, the more widespread the use of Generative AI, the more important the role of teachers in selecting, editing, validating, and contextualizing information. In Islamic Religious Education (PAI) learning, teachers have a responsibility to ensure that the materials used are not only academically sound but also align with Islamic sources and values. This highlights an important distinction between general learning and Islamic Religious Education (PAI) learning: in Islamic Religious Education (PAI), technological efficiency must go hand in hand with epistemic and moral responsibility. Thus, Generative AI should be positioned as a learning co-pilot that assists teachers, rather than as an authority determining the truth of religious material.

The most important aspect of the research findings is the emergence of challenges regarding the accuracy and validity of religious information. This finding directly supports the research(Ardana et al., 2026)which emphasizes that the use of ChatGPT in Islamic Education requires a validation process because AI can produce information that is not entirely authentic or accurate. Theoretically, this issue is related to the limitations of Generative AI as a system that generates responses based on data patterns, not on the authority of religious knowledge. Therefore, answers that appear systematic and convincing may not necessarily have a sound religious basis. In the context of Islamic Education, this issue becomes even more serious because misinformation can impact students' understanding of faith, worship, law, and morals. Findings(Syari, 2025)The findings, which demonstrate that ethics and user readiness are challenges in the adoption of AI in Islamic education, further reinforce the need for oversight mechanisms. Based on this comparison, this study confirms that AI literacy in Islamic Religious Education (PAI) learning must include the ability to conduct fact-checking and religious verification. Students should be guided to compare AI answers with primary sources and credible Islamic literature, while teachers act as validators and guides to ensure that technology use does not result in erroneous religious understandings.

Beyond accuracy issues, research findings show that the use of Generative AI presents challenges to academic integrity, technological dependency, and student learning independence. The ease with which AI can generate answers can encourage instant behavior

if students use it to complete assignments without prior thought and reflection. This situation suggests that technology use needs to be controlled through task design that demands argumentation, analysis, experience, and personal reflection. These findings also complement previous research that tends to highlight the benefits of AI for productivity and critical thinking skills. Increased productivity does not necessarily indicate improved learning quality if student work is entirely derived from AI. Therefore, a learning theory oriented toward active student involvement needs to be the basis for the use of Generative AI. Islamic Religious Education (PAI) teachers need to shift evaluation patterns from solely assessing the final product to assessing the process, such as the ability to explain sources, justify arguments, compare AI answers with Islamic references, and reflect on learning outcomes. This approach allows Generative AI to be used as a means to strengthen thinking processes, rather than as a shortcut to avoid learning.

Based on the overall findings and comparisons with previous theoretical studies and research, it is understood that Generative AI has significant potential to support the transformation of Islamic Religious Education (PAI) learning, but its use must be within a clear pedagogical, ethical, and Islamic framework. This study further emphasizes that the success of Generative AI in Islamic Religious Education (PAI) learning is determined not only by the technological opportunities, but also by the ability of teachers and students to control its use. From this perspective, the novelty of this research can be placed in the idea that the use of Generative AI in PAI needs to be built through a collaborative relationship between teachers, students, and technology, with teachers as guides and validators, students as active and critical users, and Generative AI as a learning tool. This utilization model allows the technology to provide benefits in the form of flexibility, interactivity, and efficiency without sacrificing the accuracy of religious knowledge, academic integrity, learning independence, and value formation. Thus, Generative AI is not simply a new technology in Islamic Religious Education (PAI) learning, but an instrument that must be managed critically to strengthen the goals of Islamic education in the digital era.

The novelty of this research lies in its analytical focus, which specifically combines the use of Generative AI with the opportunities and challenges in Islamic Religious Education (PAI) learning. Previous research generally emphasized ChatGPT's function as a learning assistant, increasing productivity, critical thinking skills, or the adoption of AI in Islamic education. This research offers a more integrative perspective by viewing Generative AI not only as a tool to facilitate information access and assist the learning process, but also as a technology that requires verification of religious information, teacher supervision, digital literacy, and ethical use. Thus, the novelty of this research lies in the concept of Generative AI utilization, which is oriented towards balancing technological opportunities and pedagogical-ethical challenges in Islamic Religious Education (PAI) learning, by positioning teachers as directors and validators, students as active and critical users, and Generative AI as a learning aid, not a substitute for the role of teachers.

CONCLUSION

The results of the study indicate that Generative AI has the potential to be a learning aid for Islamic Religious Education (PAI), particularly in providing information, helping to understand material, increasing interactivity, developing teaching materials, and supporting learning efficiency. However, its use also faces challenges in the form of accuracy and validity of religious information, technological dependency, academic integrity, and limited digital literacy. Based on these findings, it can be concluded that Generative AI is relevant for use in PAI learning in the digital era, but cannot replace the role of teachers because PAI learning is also oriented towards the formation of character, morals, and Islamic values. Therefore, the use of Generative AI needs to be carried out critically, selectively, and responsibly by positioning teachers as directors and validators of information, while students are encouraged to use AI as a tool for thinking and learning, not as a sole source of truth. Educational institutions are also recommended to develop guidelines for the use of Generative AI that pay attention to pedagogical aspects, ethics, academic integrity, and the validity of religious material. While further research can empirically test the effectiveness of Generative AI use in PAI learning through field research.

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