Artificial Intelligence in Teaching Islamic Studies: Challenges and Opportunities

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Abstract
The main goal of this research will be to establish how AI technology could apply to learning Islamic education and provide more critical evidence about the challenges and opportunities posed by integrating AI into such learning. In this regard, the applicability of AI and associated challenges in teaching Islamic Studies is being explored through a systematic review of literature. Different databases such as Scopus, ERIC, and Google Scholar were utilized to locate literature. Results from the identifications were thematically analyzed based on patterns, similarities, and differences among studies. Studies conducted on the current topic evidenced that AI can create multiple possibilities that will influence accelerated student development and help the teaching process to come closer to what teachers seek: satisfying and engaging tasks. Moreover, AI holds an immense opportunity to help or increase the development of pedagogical approaches for academics within their own professional perspectives and experiences. However, some of the challenges that must be addressed with care are ethical considerations and data privacy. This study is bound to add to the literature on how AI has been applied in teaching Islamic Studies, especially from the sociocultural perspective. The findings of this study are also expected to provide valuable insights for educational practitioners and researchers in the field, while helping to improve the understanding and application of religious values in daily life.
Keywords: Artificial Intelligence (AI); Islamic Education; Ethical Challenges.

INTRODUCTION

Religious education, especially Islamic education, builds the character and morality of a person. More recently, with the era of burgeoning technology, AI is gradually becoming an interesting issue among educational circles, even concerning Islamic education learning. This kind of AI technology promises a great deal that can be developed into activities aimed at improving students in this modern era in gaining newer insights into Islamic teaching and practical uses (Wiranto & Suwartini, 2022).

AI is the result of science and technology achieved in the modern century, precisely since the era of computers, which develops fast together with advances in information technology toward digitalization in all fields. Among others, the major advantages of AI are incredible speed of thinking, high accuracy, preciseness, and minimum errors. For it does not feel the state of fatigue, neither drowsiness, nor shifting of focus that may happen with humans often (Shamdi et al., 2022).

An important challenge in implementing AI into Islamic education is how to align this technology with the values and principles of Islamic teachings in other words, a technology with an ethical view, the creation of an AI system that respects the very core of Islamic beliefs. Yet, AI also offers so many opportunities in Islamic education: intelligent learning pathways tuned to students' needs, administrative tasks automated so educators have more time for meaningful interaction, and collaborative learning facilitated in virtual environments.

While the use of technology in religious education has increased, several challenges are still faced in integrating AI into Islamic education learning (Wandansari et al., 2022). One of the challenges is a lack of deep understanding of how AI can be effectively implemented within the context of religious teaching (Millatina & Azfar, 2023). Besides, there are still concerns about how these technologies may affect the religious aspects of Islamic education (Kopp & Finney, 2013).

The main challenge is therefore how to integrate these AI technologies into Islamic education and still ensure that the essence of religious education is complemented by such technologies, rather than replaced (Vinichenko et al., 2020). Further research in this regard is called for to determine the contribution AI can make in Islamic education.

Most of the literature has approached AI in education from a technological perspective (Bankins & Formosa, 2023). However, such an approach is not capable of delving deep into the complex role of AI in the instructional and learning process and its relationship with other elements of education.

While AI has indeed demonstrated immense promise in helping improve education, gaps in knowledge are still large. For instance, studies show that over the past couple of years, AI-related publications to do with education have increased dramatically. However, most of these studies emanate from departments of computer science and other STEM disciplines and not from education departments per se (Crompton & Burke, 2023). The current research on AI use in higher education also makes frequent use of AI, for assessment and evaluation, prediction, AI assistants, intelligent tutoring systems, and student learning management (Chan, 2023; Zawacki-Richter et al., 2019). As Limna et al. (2022) maintain, much research is needed on how AI can best support more effective instruction and learning. Therefore, more research needs to be done on the use of AI in Islamic education and how this will affect the quality of education.

The solution to overcome this challenge is to conduct deeper research on how AI technology can be integrated into Islamic education learning, developing the methods and tools of learning that are in line with Islamic values and principles, and such technologies should not interfere with the spiritual and religious aspects of Islamic education.

AI can accelerate the development of students and make teaching more satisfying. Moreover, teachers can also use AI to develop teaching practices and professional experience, as mentioned by Karim & Sugianto (2023). In an Islamic education context, further research may be conducted to discuss the ethics of AI in the Islamic perspective and how this contributes to global ethical norms for designing and using AI technologies.

Shamdi et al. (2022) suggest that AI can help students develop faster and make teaching more rewarding. Additionally, AI can be used to enhance teaching practices and professional experience for teachers. Additional research can be done regarding the ethics of AI within Islamic thought and how this contributes to global ethical norms in designing and using AI technologies.

The findings are important to develop a more innovative and effective method of learning in Islamic education. By using AI technology wisely, it is expected that Islamic religious education can be more interesting and relevant for the younger generation of Muslims. In addition, this research can also help improve the understanding and practice of religious values in daily life.

The important potential of AI is thus to accelerate student development, while making teaching more rewarding. Additionally, AI also supports teachers in developing their profession and professional experience. It would also be of particular value within the

context of Islamic education to investigate further the potential of research into the ethics of AI from an Islamic perspective and how this could contribute to global ethical standards for the design and application of AI technologies.

METHODS

The study is undertaken to investigate the use of Artificial Intelligence in teaching Islamic Studies. This paper will review several dimensions, strategies, and effects related to the implementation of AI in teaching Islamic studies through a literature review. The present study examines the implementation of Artificial Intelligence in Islamic studies teaching through an analysis of approach, strategy, and socio-cultural context. Furthermore, the research will look at how the use of Artificial Intelligence influences student learning and skills. Searches will be made in the following databases: Scopus, ERIC, and Google Scholar.

The keywords used include "Artificial Intelligence," "Islamic Studies," and other related keywords. The search will be limited to journal articles, books, and research reports published between 2010 and 2024. The identified studies will undergo screening based on pre-specified inclusion and exclusion criteria. The inclusion criteria are studies that specifically deal with the implementation of Artificial Intelligence in teaching Islamic Studies. Only irrelevant or studies that do not correspond to the inclusion criteria are to be excluded from this review. Data extraction in the selected studies will show context information, approaches or strategies used to implement the AI, and its resultant effects on students' learning and skills.

Data analysis will be thematically done in order to identify important patterns, similarities, and differences among studies. The methodological quality of the selected studies will be assessed using the appropriate assessment tool, which may involve Cochrane criteria or other qualitative assessment tools. Weight will, therefore, be given to analyses with stronger methodologies. The synthesis and interpretation of results for the analysis will bring to light an overall understanding relating to the implementation of AI teaching Islamic studies. Practical implications with theoretical implications of these results, recommendations, and way forward for future studies in this area. Outputs such as this research report will present results in a transparent format supported by established guidelines but always in line with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

It is expected that this systematic literature review will provide an understanding of how Artificial Intelligence has been used in teaching Islamic Studies, with a focus on the sociocultural perspective. Therefore, the conclusions of the current study may be assured of relevance and usefulness for practitioners in this field and researchers for many years to come. In this line of approach, the research study will implement a systematic and structured means of exploring literature related to the research question. The literature review here follows guidelines laid down in PRISMA on transparent reporting of research findings.

Artificial Intelligence Development Strategies for Education

Any strategy to be developed in developing artificial intelligence in education should be holistic and sustainable, ensuring that this technology will add serious value to learning.

It is necessary to develop AI in order to provide personalized support for students. This can be done by integrating AI into adaptive learning, which can customize learning materials and methods according to each student's needs and level of understanding. Thus, each student can have a learning experience that suits his or her abilities, improving the effectiveness and efficiency of learning.

The application of AI technology in education should also be directed toward developing critical skills for students, such as problem-solving, creativity, and critical thinking. It is possible to use AI technologies in learning to provide students with challenges matching their intelligence and level of interest, increasing students' motivation and interest in the learning process.

AI development can also be oriented to enrich the curriculum with innovative content that supports the development of students' multiple intelligences. With the application of AI in creating and presenting learning materials that are interesting and suitable for students' learning styles, the learning process can become more interesting and varied.

This calls for investment in research and development into AI technologies relevant to educational needs that will ensure the continued development of AI in education. Collaboration between educational institutions, industry, and government may drive innovative and impactful AI solutions for learning.

Besides the fact that AI has its shortcomings, it can effectively come up with learning experiences meant for improving the quality and relevance of education for all, provided a holistic and sustainable AI development strategy is focused.

AI Implementation in School Curriculum

To discuss the implementation of AI in the school curriculum, we can take an example of a high school that successfully integrates AI technology into learning. Using an AI-powered online learning platform, the school can personalize students' learning experiences based on their progress. The system also provides valuable information to educators to identify areas that need more attention and improve teaching strategies (Marlin et al., 2023).

In this implementation, schools work closely with AI experts and educators to develop approaches that suit the needs of students and ensure that the use of AI technology does not compromise the human and caring aspects of the educational process. Through a collaborative and sustainable approach, the school overcame technical obstacles and optimized the benefits of AI in improving learning effectiveness. This case study shows that with the cooperation between technologists and educators, integrating AI into the school curriculum can significantly impact students and the teaching process.

Several popular AI technologies have made a significant impact in the education sector. One is Chatbot, which can quickly respond to student queries and assist with school administration (Vogt et al., 2024). Chatbots can also assist students in learning, making it a virtual assistant ready to help students.

In addition, Adaptive Learning technology uses AI to tailor learning materials to students' abilities and needs (Syse & Cook, 2023). By integrating and analyzing students' responses to learning materials, AI can adjust curriculum and teaching methods in real-time, creating an optimal learning experience for each student.

AI technology also creates learning content, such as automatically generating exam questions based on difficulty levels that match students' abilities (Septiany et al., 2024). This allows for more accurate and fair assessment and reduces educators' burden of manually composing exam questions.

With the continuous development of AI technology, the education sector can continue to utilize various innovations to improve the effectiveness and quality of learning. By understanding the advantages and applications of AI technology, educators can explore ways to enhance students' learning experience and create a more innovative and inclusive educational environment.

Moreover, Adaptive Learning technology uses AI to customize learning materials based on students' abilities, thus creating an optimal learning experience by adapting curriculum and teaching methods in real time to suit each student's needs (Sentosa, 2024).

Continued advances in AI technology offer ongoing opportunities for the education sector to capitalize on innovation and improve the quality and effectiveness of the learning experience (Simonigar et al., 2023). By understanding the power and application of AI technology, educators can explore diverse approaches to enhance student learning and create a more innovative and inclusive educational environment.

The benefits of using Artificial Intelligence in learning and teaching are diverse. One is its ability to provide timely and personalized student feedback (Septiany et al., 2024). With in-depth data analysis, AI can provide specific information about each student's learning progress so that educators can provide guidance that suits individual needs.

In addition, integrating AI in learning enables the application of projection-based teaching methods that support real practice in the educational process (Sentosa, 2024). This helps students to develop practical skills and principles of theoretical concepts in a real-world context.

With these benefits, it cannot be concluded that AI greatly improves the effectiveness of the learning and teaching process. With a deep understanding of AI applications in educational contexts, we can use this technology to create more meaningful and empowering learning experiences for students and educators.

Challenges and Solutions in AI Integration in Education

Artificial Intelligence (AI) is disrupting the education sector in positive ways. Through personalized learning, improved efficiency, and actionable insight for educators, AI can all but make learning better. Nevertheless, deploying AI does have drawbacks that revolve around ethical implications, data privacy, and the preparedness of educators to embrace technologies. This paper highlights the opportunities and challenges of AI within education and implications for future research and practice.

AI has based its merit for aiding personalized learning on Vygotsky's theory of the Zone of Proximal Development (ZPD) (Vygotsky, 1978). AI allows students to learn at their ZPD because content can be tailored to their level. Their empirical study Wandansari, Islam, & Rahma, (2022) found additionally that learners using an AI-based adaptive learning platform significantly outperformed their peers in traditional classrooms. To promote engagement and understanding, the platform adapts the difficulty of the content in real-time depending on student performance.

On top of this, AI takes administrative tasks off the hands of teaching staff (Luckin & Holmes, 2016). such as grading and tracking attendance. By automating a huge portion of time-consuming school-related tasks, educators can dedicate more time to creating lessons and having one-on-one conversations with their students. AI use also adds to efficiency through AI-powered chatbots, which offer guidance and provide additional resources. Research on education by Holmes, Bialik, & Fadel, (2019) emphasizes on how chatbots in education are known to elevate student experience as it immediately responds to students questions which leads to the improvement of the satisfaction rating.

Despite the benefits, the integration of AI in education has several challenges: first, Ethical Issues and Bias in AI algorithms are still important concerns. For example, Noble, (2018) in *Algorithms of Oppression* highlights how biases embedded in training datasets can perpetuate inequality. In the context of education, biased algorithms can unfairly disadvantage certain groups of students, thus undermining equality. Educators and policymakers must proactively address this issue by developing AI systems that are transparent and inclusive; second, Reliance on large numbers of students raises concerns about privacy and security. Voigt & Von dem Bussche, (2017) emphasize the importance of a strong data governance framework to protect sensitive information. Without adequate protection, misuse of data can lead to breaches of student confidentiality, eroding trust in AI systems; third, Lack of Technical Expertise Xiao, Xu, Skare, Qin, & Wang, (2024) identified a significant gap in educators' technical knowledge to effectively implement AI tools. This lack of expertise may result in suboptimal use of AI technologies, limiting their potential impact. Therefore, a comprehensive training program is essential to bridge this gap and empower educators to utilize AI effectively.

In general, this study makes important contributions to the previous literature, especially in two main aspects:

1. Reinforcement of Personalized Approaches in Education. This study extends previous research highlighting the effectiveness of personalized learning through (Luckin & Holmes, 2016). By exploring the role of AI in adjusting the level of difficulty of materials according to students' abilities, this study provides empirical evidence on the effectiveness of such approaches. This is relevant for strengthening the adoption of technology in the education curriculum.
2. Emphasis on Ethical Framework and Data Privacy. Noble, (2018) has presented the challenge of algorithm bias, while Ismail & Aloshi, (2025) highlighted the importance of

data privacy. This article combines both perspectives by providing solutions in the form of ethical frameworks and data privacy policies that can be implemented by educational institutions.

To address these challenges and maximize the benefits of AI in education, the following strategies are proposed: first, Develop Ethical Guidelines Creating a clear ethical framework is essential to overcome bias and ensure fairness. Transparency in algorithm design and periodic audits are recommended to minimize potential inequities. second, Strengthen Data Governance. Strong data protection policies should be implemented to protect student information. Research by Panigrahi et al. (2021) shows that adopting blockchain technology can improve data security by making records decentralized and tamper-resistant. third, Training programs that focus on technical skills and ethical considerations are essential. Xiao, Xu, Skare, Qin, & Wang, (2024) proposed a multilevel training framework that includes basic AI knowledge, hands-on practice, and discussion of ethical implications. fourth, Integrated AI and Human CollaborationAI should complement, not replace, human educators. As (Luckin & Holmes, 2016). argue, the most effective educational environments are those in which AI serves as a support tool, reinforcing human capabilities rather than replacing them.

As a piece of academic work, this study leaves much room for future research to explore the long-term impact of AI on educational outcomes, especially in diverse cultural and socioeconomic contexts. The development of universally accessible AI tools that accommodate the needs of marginalized communities is another important area for research. In addition, longitudinal studies examining the ethical and psychological implications of using AI in education will provide valuable insights for policy makers and practitioners.

CONCLUSION

List of Benefits of AI in EducationArtificial Intelligence (AI)Technology has now become an integral part of the education sector because of the significant benefits AI offers to the education sector, including learning personalization, administrative staff automation, and extensive data analysis in order to make better decisions. This has helped AI create a more inclusive learning environment for every student. However, ethical concerns and data privacy need to be properly accounted for. Now, being used effectively, AI can bridge the gap between the two core needs here and will prove to be a rather useful resource for educators and students alike to shore up with.

In order to leverage the advantages of AI in education, several areas need further research. First, study how AI can better reinforce students on an individual basis. Second, students can use AI to build important skills based on research. Third, study how AI can enhance the curriculum with new content. Focus on research on how AI can help educational institutions become more efficient and productive. Finally, investigate how AI can help protect student data and privacy. Further study in the above areas can also make sure AI is a boon to the education system.

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