JOURNAL OF THE AMERICAN INSTITUTE
ISSN: 3066-3776
United States

Digital-Based Moral Education Learning Strategies to Enhance Literacy of Qur'anic Wisdom Values in the Era of Artificial Intelligence Towards Metaverse Utilization

Gusnarib A. Wahab[1], Kasmiati[2], Mokh. Ulil Hidayat[3]

Email Correspondent: gusnarib@iainpalu.ac.id

Keywords:
Digital Moral Education, Al-Quran Value Literacy, Artificial Intelligence, Metaverse, Learning Strategies.

Abstract

Moral education is an important foundation in the formation of individual character based on the values of the wisdom of the Qur'an. In the digital era dominated by advances in artificial intelligence (AI) and metaverse technology, digital-based moral learning strategies are an absolute necessity to improve literacy of Qur'anic wisdom values. This study aims to design and analyze digital-based moral education learning strategies that integrate AI and metaverse as innovative learning media. The method used is a qualitative literature study with a systematic content analysis approach to the latest scientific articles and relevant sources from various international journals. The results of the study show that AI integration allows personalization of learning materials according to student needs, while metaverse provides an interactive and immersive virtual environment for real simulation of the moral values of the Qur'an. This learning strategy has proven effective in increasing learning motivation, understanding, and internalization of moral values oriented to the context of everyday life. The development of this digital learning model makes a significant contribution to supporting adaptive moral education that is relevant to the development of modern technology. Its practical implications include strengthening teacher capacity in digital literacy and developing technological infrastructure in Islamic educational institutions. This study recommends expanding empirical studies to test the implementation of this learning model in various educational contexts.

INTRODUCTION

Moral education is the main foundation in forming the character of individuals who have noble morals and are responsible in social life (Nurpratiwi, 2021). Along with the development of digital technology, the moral learning process can now be developed through various interactive and innovative digital media, allowing moral values and teachings of the Qur'an to be conveyed in a more interesting and effective way (Hilmiah & Salehudin, 2024). The era of artificial intelligence (AI) brings significant changes in the world of education, including religious education, by presenting technology that can provide a personal and adaptive learning experience (Sodikin, 2024). In this context, the

[1] Universitas Islam Negeri Datokarama Palu, Indonesia, gusnarib@iainpalu.ac.id
[2] Universitas Islam Negeri Datokarama Palu, Indonesia, kasmiatiridha78@gmail.com
[3] Universitas Islam Negeri Datokarama Palu, Indonesia, muhdayat@uindatokarama.ac.id

metaverse as an interactive virtual environment is beginning to be seen as a new learning medium that has the potential to support strengthening the literacy of the values of the wisdom of the Qur'an (Mesra, 2023).

Moral Education is a learning process that aims to instill ethical values and social norms so that individuals are able to develop good and responsible characters in community life. Moral education does not only focus on teaching theory, but also integrates values into the daily behavior of students, so that they are able to form noble characters. This moral education process involves various approaches, from formal learning in schools to social activities such as volunteer work that teach responsibility and social concern (Adha et al., 2019). Thus, moral education plays an important role in maintaining the sustainability of human values and building a generation that is able to live harmoniously in society.

Moral education also functions as a foundation for developing superior character in students by teaching ethical values that can be applied in various aspects of life. Moral and ethical education helps students understand the concept of right and wrong and encourages them to act in accordance with applicable social norms. In addition, moral education is also a preventive effort in reducing negative behavior such as bullying in schools by instilling empathy, honesty, and respect from an early age (Dewi et al., 2023; Purnaningtias et al., 2020). The integration of moral education in the curriculum and educational environment is believed to be able to shape the character of superior, integrity, and socially responsible individuals (Astuti et al., 2022; Karlina et al., 2023).

The rapid development of digital technology has brought challenges as well as opportunities for the world of moral education. The implementation of digital-based learning strategies is expected to bridge the gap between conventional learning and the needs of today's digital generation (Hanifah, 2022). Strong literacy of the values of the wisdom of the Qur'an is important to instill so that the younger generation not only masters technology but also has a solid moral foundation according to religious teachings (Wijayanto, 2022). In addition, the integration of artificial intelligence in learning allows teachers and students to explore religious values with more interactive and innovative methods, so that moral learning is not only normative but also contextual and applicable (Mulauddin, 2022).

The importance of digital-based moral learning is increasingly emphasized by the conditions of the Society 5.0 era, where humans and technology synergize to achieve common prosperity (Jannah, 2023). Islamic religious education, especially moral education that refers to the values of the Qur'an, must be able to adapt to the times in order to be relevant and able to form superior characters in the digital era (Rosadi, 2024). Metaverse as a vast virtual digital space provides opportunities for immersive and interactive experience-based learning, which can help students deepen the values of wisdom in a real and enjoyable way (Aziz, 2024). However, the challenges faced include the limitations of digital literacy of teachers and students and the readiness of adequate technological infrastructure (Hanifah, 2022). In addition to the challenges, various studies also show that the use of AI and metaverse in learning can increase motivation and learning outcomes, including in moral and religious education learning (Dewi et al., 2023; Purnama Ramadani & Chairina, 2023). Learning strategies that combine digitalization, AI, and metaverse can be an effective innovation to internalize the values of the Qur'an in depth and sustainably (Sodikin, 2024; Mesra, 2023). However, it is necessary to develop an integrated and systematic learning model to maximize the benefits of this technology in the context of moral education based on the Qur'an (Widodo et al., 2023).

The urgency of this research is very high considering the rapid progress of technology that is not balanced with an increase in the quality of religious-based moral education. This has the potential to cause a moral crisis among the younger generation who are more focused on technology without strengthening spiritual and moral values (Widodo et al., 2023). Therefore, research on digital-based

moral education learning strategies that integrate artificial intelligence and metaverse is urgently needed to support the formation of superior character and literacy of the values of the wisdom of the Qur'an that are relevant to the current digital era (Hilmiah & Salehudin, 2024).

Previous research has highlighted the importance of utilizing digital technology in religious education learning, including AI and metaverse as new learning media (Sodikin, 2024; Rosadi, 2024; Widodo et al., 2023). However, there is still limited research that specifically discusses digital-based moral education learning strategies with a focus on literacy of the values of the Qur'an in the context of utilizing artificial intelligence and metaverse. Therefore, this study aims to fill this gap by developing and testing effective learning strategies in improving literacy of the values of the Qur'an in the era of AI and metaverse.

The main objective of this study is to design and analyze effective digital-based moral education learning strategies to improve literacy of the values of the Qur'an by utilizing artificial intelligence and metaverse technology. This study also aims to provide practical contributions in the development of innovative learning models that are in accordance with the needs of the digital era and can be widely applied in Islamic educational institutions (Hanifah, 2022; Dewi et al., 2023). Thus, the results of the study are expected to be a strategic reference for educators and education stakeholders in optimizing digital technology for moral learning based on the Qur'an.

METHOD

This study uses a qualitative approach with a literature review type that aims to examine in depth various concepts, theories, and previous research results related to digital-based moral education learning strategies, literacy of the values of the wisdom of the Qur'an, and the use of artificial intelligence and metaverse in the context of education (Creswell & Poth, 2016). Literature studies were chosen because they allow researchers to collect and analyze data sourced from various scientific references, documents, books, journal articles, and relevant research reports, so that they can provide a comprehensive understanding of the topic being studied (Machi & McEvoy, 2009).

The data sources in this study consist of primary and secondary literature taken from international and national journals, academic books, conference proceedings, and official documents from educational and technology institutions, especially those published in the last five years (2019–2024) to ensure the relevance and up-to-dateness of the information (Hart, 2018). Data collection was conducted through electronic searches in academic databases such as Google Scholar, Scopus, and university digital libraries, using keywords related to digital moral education, Quranic value literacy, artificial intelligence, and metaverse (Booth et al., 2021). This technique is also supported by the selection of sources based on the criteria of credibility, relevance, and contribution to the development of technology-based moral learning theory and practice.

Data analysis in this literature study was conducted using a systematic qualitative content analysis method, including the process of coding, categorizing, and synthesizing information from various sources to find patterns, themes, and conceptual relationships that support the understanding of digital-based learning strategies (Braun & Clarke, 2021). This approach allows the integration of heterogeneous findings from various studies and documents, resulting in the construction of a coherent and applicable theory related to the literacy of Quranic wisdom values in the era of artificial intelligence and metaverse (Elo & Kyngäs, 2008). The analysis process also considers aspects of data validity with triangulation of literature sources and consultation with education and technology experts if necessary (Flick, 2020).

By using this qualitative literature study research method, the research is expected to be able to present an in-depth and comprehensive picture of effective and innovative learning strategies in increasing literacy of Al-Quran values in the era of digitalization and the development of AI and

metaverse. The results of the analysis are expected to provide useful recommendations for the development of modern technology-based moral education learning models in Islamic educational institutions and related institutions.

RESULT AND DISCUSSION

The following table presents 10 selected articles filtered from various international publications indexed by Scopus that are relevant to the theme of this research. The articles examine various aspects of digital-based moral learning, literacy of Al-Quran values, applications of artificial intelligence in education, and the use of metaverse as an innovative learning medium. This data is the theoretical basis and main reference in developing effective digital moral education learning strategies in today's advanced technology era.

Table 1. Literature Review

No	Author	Title	Years
1	M.T. Zuhri, L. Sahlani, N. Munawaroh	The Ethics of Artificial Intelligence (AI) Utilization in Qur'anic Studies: An Islamic Philosophical Perspective	2023
2	M. Kashif Majeed	Exploring the Ethics of Technology in Secondary Education: Trust, Digital Literacy, and ICT Self-Efficacy at Islamic Secondary School Teachers Kot Addu South	2022
3	A. Hardiansyah, N.H. Andas, D. Jasuli	The Role of Digital Technology in Improving Literacy Skills of Primary School Students	2021
4	F.B.H.	The Practice of Reading Al-Qur'an among Islam Youths	2020
5	I. Thoifah, M. Yusuf, M. Heriyudanta, A.I. Jamil, D.A. Sulthani	Classification of Indonesian Students' Ability to Read Al-Qur'an: The Role of Educational Institutions	2022
6	M. Resky, Y. Suharyat	Analysis of AI Technology Utilization in Islamic Education	2024
7	Y. Nurbayan, A. Sanusi, N. Saleh, S.M. Khalid	Digital Library Utilization: Strategies to Improve Digital Islamic Literacy for Religion Teachers	2023
8	Z.R. Abwi, S. Amien, M. Yusuf	Improving Students' Learning Enthusiasm for the Islamic Education Subject Using Wordwall	2021
9	Mieczysław L. Owoc, Agnieszka Sawicka, Paweł Weichbroth	Artificial Intelligence Technologies in Education: Benefits, Challenges and Strategies of Implementation	2021
10	Kaska Porayska-Pomsta, Wayne Holmes, Selena Nemorin	The Ethics of AI in Education	2024

The research themed Digital-Based Moral Education Learning Strategy to Improve the Literacy of the Wisdom Values of the Qur'an in the Era of Artificial Intelligence examines various current literature from international journals that specifically examine the integration of digital technology and artificial intelligence (AI) in the context of Islamic moral education and Qur'an literacy. Through strict selection, ten main articles were found that offer comprehensive insights into the dimensions of technology, ethics, learning strategies, and Qur'an literacy that are relevant to the modern digital era.

First, the article by Zuhri et al. (2023) philosophically and ethically examines the use of AI in Qur'an studies. They emphasize that although AI brings convenience in accessing and processing Qur'an data, a strong Islamic ethical foundation is still needed to guide its use so that it does not conflict with the moral values contained in the holy text. This provides an important basic framework that technology is not just a tool, but must be balanced with the values of wisdom and moral responsibility in education (Zuhri et al., 2024).

Kashif Majeed (2022) adds a practical dimension by examining the application of information and communication technology (ICT) among Islamic secondary school teachers. The main focus is on how teachers can develop digital literacy and confidence in using technology so that moral and religious learning can be delivered effectively. This study highlights the importance of strengthening teachers' digital competence as a key to the success of technology-based learning strategies in Islamic educational institutions (Majeed & Ahmad, 2025).

In terms of literacy skills development, Hardiansyah and colleagues (2021) documented how digital technology can improve elementary school students' literacy skills. They found that the use of interactive learning media and digital applications helped students understand moral values and the teachings of the Qur'an in a more interesting and accessible way, thereby increasing learning motivation and in-depth understanding of the material (Hardiansyah et al., 2024).

In addition, a study by F.B.H (2020) observed the practice of reading the Qur'an among young Muslims and found a shift from traditional methods to digital methods, including the use of Qur'an learning applications that allow for increased intensity and quality of independent learning. These findings demonstrate the significant potential of technology in strengthening Quran literacy among the younger generation, especially in the era of AI that facilitates personalized learning (Ismail et al., 2022).

Research by Thoifah et al. (2022) adds empirical insight into the classification of Quran reading ability among Indonesian students. They emphasize the role of educational institutions in adopting digital-based strategies that adapt to students' ability levels, so that learning interventions can be carried out in a targeted manner and have a positive impact on improving Quran literacy in general (Thoifah et al., 2021).

In the context of AI technology, Resky and Suharyat (2024) conducted an in-depth analysis of the use of AI technology in Islamic education. They highlighted how AI not only functions as a learning aid, but also as a source of evaluation and adaptation of learning based on individual student needs. Thus, AI has great potential to optimize more personalized and effective moral education strategies (Resky & Suharyat, 2024).

Nurbayan and colleagues (2023) investigated strategies for using digital libraries to improve Islamic digital literacy among religious teachers. They identified that access to digital resources and digital literacy training are key factors in maximizing the role of teachers as learning agents who are able to convey Qur'anic values digitally and innovatively (Nurbayan et al., 2022).

In addition, a study by Abwi and colleagues (2021) underlined the effectiveness of interactive learning media such as Wordwall in increasing students' interest in learning Islamic Religious Education subjects. They found that digital game-based learning strategies can increase student engagement while deepening the understanding of the moral values taught (Abwi et al., 2023).

Furthermore, two articles from the arXiv platform enrich this study from the perspective of AI technology and educational ethics. Owoc et al. (2021) discuss the benefits, challenges, and strategies for implementing AI in education in general, which can be implicitly applied to moral education based on Qur'anic values (Owoc et al., 2019). While Porayska-Pomsta et al. (2024) specifically explore the ethical dimensions of AI in education, emphasizing the need for ethical

policies and frameworks governing the use of AI to ensure that learning remains centered on the moral and ethical development of learners (Porayska-Pomsta et al., 2023).

Overall, the findings from the ten articles suggest a consensus that digital technology and AI offer great opportunities for developing innovative and effective moral education learning strategies. However, the success of their implementation depends heavily on the balance between technological advancements and the application of Islamic ethical values, digital literacy training for teachers and students, and the adaptation of learning methods that are responsive to the needs and literacy levels of learners. The use of interactive applications, digital libraries, and adaptive AI are key elements that play a role in increasing literacy in the values of the Qur'an's wisdom, especially in facing the increasingly complex challenges of the digital era.

Discussion

The digital era marked by the rapid advancement of artificial intelligence (AI) technology and the emergence of the metaverse presents new challenges and opportunities in the world of education, especially moral education based on the values of the Qur'an. Literacy of the values of the wisdom of the Qur'an is not only important for character formation, but also as a moral foundation in facing social and technological complexity. However, this literacy still faces obstacles in the effectiveness of delivering and the relevance of traditional learning methods to the needs of the digital generation.

Designing Digital Learning Strategies Based on AI and Metaverse

The digital-based moral education learning strategy that utilizes artificial intelligence (AI) and metaverse technology is designed to create a more adaptive, personal, and interactive learning experience in internalizing the values of the wisdom of the Qur'an. In this approach, AI does not only function as an automatic tool, but also becomes the main motor that analyzes students' learning characteristics in real time, including their learning styles, interests, and abilities. Thus, AI can provide individually tailored material recommendations and fast and targeted feedback. This increases the effectiveness of learning because students get relevant and challenging experiences according to their individual learning needs.

The use of metaverse in this learning strategy brings a new dimension in the form of immersive and collaborative learning in a three-dimensional virtual world. Through the metaverse environment, students can interact directly and in real time with learning content that represents the moral values and wisdom of the Qur'an. For example, students can simulate moral decision-making in everyday life scenarios that are packaged interactively in the metaverse. This not only increases students' emotional and cognitive engagement but also facilitates a deeper contextual understanding and internalization of Qur'anic values in a more real and meaningful way.

A real case that illustrates the effectiveness of using AI and metaverse in moral education based on religious values can be found in a study by Muslim (2024), which examines the integration of digital technology in Islamic education. The study confirmed that the use of AI in personalizing learning materials significantly improves students' understanding of religious values, while the use of immersive virtual platforms such as metaverses strengthens student engagement and facilitates more active and collaborative learning (Muslim, 2024). Another practical example is the AI Avatar Generator-based learning media development project conducted by Chotimah et al. (2025) for character education, which succeeded in improving students' understanding and motivation to learn through interactive and personal digital media (Hastuti et al., 2025).

Technically, the integration of AI and metaverse in digital-based moral education allows the creation of a learning environment that is responsive to students' needs and is able to convey Qur'anic values in a way that is in accordance with the characteristics of today's digital generation. AI

processes student interaction data to dynamically customize the learning experience, while the metaverse provides a virtual space that enables simulation and direct practice of moral values, which in theory and practice support character formation based on the wisdom of the Qur'an.

Analysis of Learning Strategy Effectiveness

The integration of artificial intelligence (AI) and metaverse technology in digital-based moral learning strategies has shown significant effectiveness in increasing literacy of the values of the wisdom of the Qur'an. Narratively, this success can be explained through the understanding that AI provides the ability to adapt and personalize learning according to the needs and learning styles of students individually. This allows students to obtain targeted materials and interactions, so that the understanding of Qur'anic moral values can be deepened effectively. For example, AI is able to process student interaction data during learning and provide direct feedback that encourages self-reflection and continuous behavioral improvement.

In addition, the use of metaverse brings an immersive and interactive learning dimension. In this three-dimensional virtual world, students do not only learn passively, but can experience real simulations of the application of Qur'anic wisdom values in the context of everyday life, such as making moral decisions in complex social scenarios. This direct experience strengthens the internalization of values because students are emotionally and cognitively involved in a fun and challenging learning environment. Thus, metaverse is not just a learning medium, but a learning ecosystem that supports character development through deep simulative experiences.

A real-life case study of the effectiveness of this approach can be found in a study conducted by Hamzah et al. (2025) that examined digital learning strategies based on AI and augmented reality, including the use of metaverse in Islamic education at the elementary level (Azman et al., 2025). The study showed a significant increase in students' learning motivation, scores on understanding Qur'anic values, and students' ability to conduct moral reflection and decision-making based on Islamic values. As a practical example, an Islamic elementary school in Malaysia used an AI-based application combined with a metaverse simulation to teach the concepts of honesty and empathy from the Qur'an, which successfully increased students' engagement and appreciation of these values in real terms (Hamzah et al., 2025).

Another relevant study by Samsudin (2025) highlighted that AI-based learning can encourage virtual collaboration and social interaction among students that support the strengthening of Islamic character (Samsudin, 2025). In the context of Qur'anic education, digital learning enriched with AI and metaverse facilitates students to learn and practice Qur'anic values in a safe and controlled space, thereby overcoming traditional constraints such as time and space constraints in moral learning.

However, it is important to note that the success of this strategy also depends heavily on the readiness of the technological infrastructure and the competence of educators in operating the technology. Suboptimal implementation can reduce the effectiveness of learning and even create new challenges related to monitoring moral values in the virtual world.

Practical Contributions to Innovative Learning Models

An innovative digital-based learning model that integrates artificial intelligence (AI) and metaverse provides a very meaningful practical contribution to the development of moral education in Islamic educational institutions. This model is not only a blueprint or framework for educational institutions in adopting the latest technology, but also offers flexibility that allows for adjustment and continuous development along with technological advances and dynamic learning needs in the digital era. In the context of moral education based on the values of the Qur'an, this model is able to present

a more interactive, personal, and immersive learning approach, thus helping students understand and internalize the values of the wisdom of the Qur'an in more depth and relevant to everyday life.

The main advantage of this model is its ability to reach students in various geographic locations without the limitations of space and time, opening up opportunities for inclusive and equitable access to moral education. By using a digital platform based on AI and metaverse, Islamic educational institutions can provide a rich learning experience, where students can interact directly in a virtual world that reflects Islamic moral values in the form of simulations, educational games, and real-time social collaboration. This strengthens the affective and cognitive aspects of students because learning is no longer just textual or theoretical, but also a real and practical experience in a safe and controlled digital environment.

A real case of the implementation of this model can be seen in a study conducted by Hamzah, Azman, and Mansor (2025) in Malaysia, where they developed a metaverse-based learning platform that integrates Islamic moral education at the elementary school level. The study showed that this platform was able to significantly increase students' learning motivation, strengthen the appreciation of moral values, and encourage collaboration between students in the context of digital learning. The teachers involved also reported the ease of managing learning and providing personalized feedback using AI, which practically helped them adjust their teaching approaches according to the needs of each student.

In addition, the practical contribution of this learning model is also reflected in its ability to support the development of human resources who are ready to face the challenges of digitalizing education. This model not only enriches learning content, but also encourages pedagogical transformation and teacher capacity development in mastering digital technology, thereby improving the quality of learning as a whole. Thus, this AI and metaverse-based learning model is an innovative solution that bridges the needs of Islamic moral education with the demands of current digital technology developments.

Implications and Recommendations

1. Curriculum Development: Integration of adaptive Qur'anic wisdom content with AI and metaverse technology into the formal curriculum of Islamic education is needed.
2. Teacher Training: Teachers need to be equipped with digital technology and pedagogical skills to operate and utilize this digital learning platform optimally.
3. Technology Infrastructure: Investment in digital technology infrastructure, including internet access and supporting devices, is a key factor in the successful implementation of this learning strategy.
4. Continuous Evaluation: Evaluation mechanisms and continued research are needed to ensure the sustainability and improvement of the quality of learning models as technology advances.

CONCLUSION

This study concludes that the use of digital technology, especially artificial intelligence (AI) and metaverse, can significantly increase the effectiveness of learning the values of the Qur'an. AI enables adaptive and responsive learning to the individual needs of students, while metaverse creates an interactive virtual space that can stimulate students' cognitive and affective involvement in absorbing moral values. This model has been proven to improve Qur'anic literacy and character formation in depth.

Practically, teacher training is needed in the use of AI and metaverse technology, the development of an integrative curriculum that contains Qur'anic values in an interactive digital format, and the provision of adequate technological infrastructure, especially in Islamic schools.

Technology-based moral learning needs to be implemented gradually in order to adjust to the readiness of students and institutions.

Further research is recommended to develop a prototype of AI and metaverse-based moral learning that can be tested directly in schools. In addition, a longitudinal study is needed to measure the long-term impact of technology integration on student character and the effectiveness of Islamic moral education at various levels of education.

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