

# UTILIZATION OF ARTIFICIAL INTELLIGENCE (AI) IN PERSONALIZING ISLAMIC RELIGIOUS EDUCATION MATERIALS FOR GENERATION ALPHA

Siti Muawana <sup>a\*)</sup>, Ilman Nafi'a <sup>a)</sup>, Muslihudin <sup>a)</sup>, Akhmad Affandi <sup>a)</sup>

<sup>a)</sup> UIN Siber Syekh Nurjati Cirebon, Cirebon, Indonesia

<sup>\*)</sup>Corresponding Author: [muawana1009@gmail.com](mailto:muawana1009@gmail.com)

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**Abstract.** The background of this study is rooted in the paradigm shift of education in the digital era, in which Generation Alpha (children born between 2010 and 2025) has emerged as a group of pure digital natives with unique cognitive characteristics and learning behaviors. In the context of Islamic Religious Education (IRE), a major challenge lies in the mismatch between conventional, classical, and static teaching methods and the needs of Generation Alpha, who expect learning experiences that are personal, interactive, and instant. Therefore, the integration of Artificial Intelligence (AI) technology is considered an urgent necessity to bridge this gap through more adaptive personalization of instructional materials. The main objective of this study is to explore the potential and mechanisms of utilizing AI in personalizing Islamic Religious Education materials for Generation Alpha students. This research examines how intelligent algorithms can map individual students' needs and provide religious content that aligns with their learning profiles. The focus of the analysis is directed at three main aspects: adaptability of cognitive content, the use of virtual assistants in independent learning, and the role of data analytics in monitoring individual spiritual development and understanding of Islamic legal principles. This study employs a descriptive qualitative method with a library research approach. An in-depth analysis was conducted on various scientific literature, educational technology journals, and relevant Islamic education curriculum documents to synthesize a conceptual framework. Data were collected through searches of global and national academic databases using keywords related to AI, personalized learning, and the characteristics of Generation Alpha. Content analysis was critically applied to evaluate the effectiveness and psychological impacts of AI utilization in religious education settings. The results indicate that the use of AI through adaptive learning systems can create unique learning paths for each student, enabling more optimal mastery of materials such as tajwid, Qur'anic memorization, and prophetic biography according to individual learning pace. AI has been proven to enhance student engagement through instant feedback and more attractive material visualization. However, this study also identifies serious risks related to digital dependency and the potential erosion of teachers' authority as moral role models (*uswah hasanah*) if the technology is not managed within an appropriate Islamic ethical framework. The conclusion emphasizes that AI is a highly transformative instrument for the future of Islamic Religious Education, yet it cannot stand alone as a substitute for educators. The most effective strategy is collaboration between artificial intelligence in cognitive-technical aspects and teachers' roles in affective-spiritual guidance. It is recommended that curriculum developers and Islamic education practitioners begin adopting AI literacy to ensure that the personalization of religious materials remains within the corridor of sound Islamic creed and authentic values of *akhlakul karimah* for Generation Alpha.

**Keywords:** Artificial Intelligence, Personalization of Learning Materials, Islamic Religious Education, Generation Alpha, Adaptive Learning

## I. INTRODUCTION

Indonesia's territory, which is located on the border with Generation Alpha, chronologically born between 2010 and 2025, represents a unique educational subject unprecedented in human civilization. They were born at a time when the Internet of Things (IoT), Big Data, and Artificial Intelligence were no longer science fiction, but fundamental infrastructures of daily life. From an early age, these children have interacted with voice assistants such as Siri or Alexa, consumed algorithm-curated content on platforms like YouTube, and lived social lives seamlessly integrated between physical and digital worlds. Their main characteristics include instinctive digital literacy,

accompanied by relatively shorter attention spans and high expectations for information personalization (Ziatdinov, 2022). This phenomenon brings significant implications for education, particularly Islamic Religious Education (IRE), which has often been perceived as rigid and traditional.

Pedagogical gaps emerge as a central issue when IRE teaching methods in schools remain confined to the "banking model" of education, where teachers are regarded as the sole source of knowledge and students as passive recipients. For Generation Alpha, this model is not only boring but also functionally irrelevant. They are accustomed to instant answers from search engines and expect learning materials tailored to their immediate needs. Fauzi (2023) argues that the

failure of IRE to adapt to the digital cognitive patterns of Generation Alpha may result in declining interest in religion, as moral messages and Islamic legal teachings are delivered in ways disconnected from their personal realities. Therefore, a fundamental reengineering of IRE content delivery is required to make it more adaptive and personalized.

Artificial Intelligence (AI) emerges as a key instrument to address this personalization challenge. AI in religious education should not merely be viewed as a presentation aid, but as an intelligent system capable of understanding the uniqueness of each Muslim learner. Through Adaptive Learning Systems, IRE materials can be broken down into smaller units tailored to students' comprehension speed. Tlili et al. (2023) explain that AI has predictive analytics capabilities, enabling systems to anticipate difficulties students may encounter in certain topics such as makharij al-huruf in tajwid or inheritance logic in fiqh and automatically adjust learning modules accordingly. This personalization allows each Generation Alpha student to feel that Islamic teachings are directly addressing their individual intellectual capacities.

Moreover, the urgency of AI utilization in IRE is also related to safeguarding the authenticity of religious narratives amid the flood of digital information. Generation Alpha is frequently exposed to fragmented religious information on social media, which often lacks authoritative sources. By integrating AI trained on authoritative Islamic databases such as classical Islamic texts and official fatwas educational institutions can provide virtual assistants capable of addressing students' doubts accurately and personally (Hidayat, 2023). This creates a safe digital learning environment in which students can explore theological and legal concepts without the risk of exposure to radical or deviant ideologies.

Nevertheless, behind this technological optimism lie profound theological and ethical concerns regarding the role of teachers as murabbi (spiritual educators). Islamic education is not merely the transfer of cognitive information, but a process of tazkiyatun nafs (spiritual purification) that requires physical role modeling and emotional engagement from teachers. Pratama (2023) emphasizes that no matter how advanced AI algorithms become, they lack the "soul" to transmit sincerity and piety. The risk of mechanizing religion becomes real if personalization is limited to efficiency without character formation. Therefore, discussions on AI utilization in IRE must promote a hybrid model in which AI handles cognitive-personal efficiency, while human teachers focus on spiritual and ethical guidance.

## II. RESEARCH METHODS

This study employs a qualitative approach using a descriptive-analytical library research method. This method was chosen due to the complexity of the research object, which connects advanced AI technology with the pedagogical domain of Islamic Religious Education for Generation Alpha. According to Rohyana (2024), library research in the digital era is not merely about collecting references, but a critical process of synthesizing new theories from secondary data

dispersed across global digital databases. Given the dynamic nature of AI implementation in IRE curricula, this method allows researchers to map the latest technological trends without being constrained by geographical or institutional limitations.

The research design focuses on exploring the concept of religious learning personalization through intelligent algorithms. The researcher acted as the primary instrument, conducting systematic searches of literature relevant to the educational ecosystem of Generation Alpha. The research stages began with problem identification, namely the gap between Generation Alpha's digital-native learning characteristics and the limited availability of adaptive IRE platforms. The collected data included indexed scientific journals (SINTA and Scopus), international conference proceedings on educational technology, recent textbooks on Generation Alpha psychology, and technical reports from educational technology development institutions (Salsabila, 2023).

Data collection was conducted through digital documentation methods using academic search engines such as Google Scholar, ScienceDirect, and IEEE Xplore. Specific keywords were employed, including "Generative AI in Islamic Studies," "Adaptive Learning Path for Gen Alpha," "Large Language Models for Religious Education," and "Artificial Intelligence Ethics in Madrasah." To ensure data relevance and novelty, literature published between 2022 and early 2025 was selected, considering the rapid development of generative AI technologies since 2023 (Hidayatullah, 2025).

Data analysis utilized content analysis and comparative analysis techniques. The study examined various AI models such as Intelligent Tutoring Systems (ITS) and Natural Language Processing (NLP) to assess their applicability in IRE curricula covering Qur'an, Hadith, Fiqh, Aqidah-Akhlaq, and Islamic history. Sari et al. (2024) argue that data analysis in educational technology research must link machine capabilities with students' psychological needs. Accordingly, the researcher compared Generation Alpha's cognitive development theories with AI algorithm functionalities to draw conclusions regarding the effectiveness of personalized religious learning.

To ensure data validity, triangulation of theories and virtual peer review through digital academic forums were applied. Synchronization between instructional technology experts' perspectives and Islamic scholars' views on the legality and ethics of AI use was conducted to ensure theological legitimacy. Santoso (2024) highlights that validity in digital-based IRE research must include "Digital Isnad," ensuring that AI-generated religious content remains traceable to authoritative Islamic sources.

## III. RESULT AND DISCUSSION

Adaptive Curriculum Dynamics in Aqidah and Fiqh Learning

The findings indicate that AI integration has transformed IRE material delivery from a linear-static model to a spiral-adaptive structure. In the cognitive domain, AI can map students' understanding of abstract concepts such as tawhid

or pillars of faith through interactive quiz pattern analysis. For Generation Alpha learners with strong visual-spatial preferences, AI automatically personalizes content by presenting short videos or graphic simulations when students struggle with narrative texts (Wibowo & Pratama, 2024). This aligns with findings that machine-learning-based personalization increases memory retention by up to 40% compared to conventional lectures, as materials consistently fall within students' zones of proximal development.

In fiqh learning, Intelligent Tutoring Systems enable highly personalized worship simulations. Literature analysis shows that AI-based IRE applications can detect specific errors in wudu or prayer practices through camera sensors analyzed by computer vision. Personalization occurs when the system provides instant feedback focused solely on incorrect steps, eliminating the need to repeat entire procedures. Al-Fatih (2025) notes that this efficiency aligns with Generation Alpha's preference for instant yet accurate outcomes, reducing cognitive load and allowing deeper reflection on the philosophical meaning of worship practices.

#### Transformation of Teacher-Student Interaction and Digital Moral Development

The discussion reveals a shift in teacher roles from information transmitters to value validators. With AI handling technical personalization, IRE teachers gain more time for emotional and spiritual engagement. Data show that teachers utilizing AI assistants in lesson planning have up to 60% more time for personal discussions on moral and digital ethics issues (Susanto, 2023). This is crucial for Generation Alpha, who often face identity crises in digital spaces. Teachers act as spiritual curators, ensuring AI-personalized religious information aligns with authentic Islamic scholarship.

Furthermore, AI-based personalization plays a vital role in fostering Islamic digital citizenship. Through intelligent virtual assistants, students can consult real-time guidance on Islamic social media ethics. Research indicates that AI chatbots trained on akhlakul karimah databases can provide behavioral advice in cases of cyberbullying or misinformation. Syarifuddin (2024) argues that such personalized ethics guidance is more effective because it is preventive and present within the digital environments Generation Alpha inhabits. Nevertheless, teacher involvement remains essential in instilling fear of Allah (khauf) and hope (raja'), which cannot be generated by algorithms alone.

#### Ethical Risk Mitigation, Algorithmic Bias, and Authority Challenges

Despite its benefits, personalization also poses risks related to religious "filter bubbles," where students are exposed to only one school of thought. To mitigate this, IRE curricula must adopt an "AI moderation" principle, ensuring algorithms introduce diverse scholarly opinions proportionally (Kusuma & Aris, 2025). Thus, personalization should not compromise the breadth of religious understanding.

Finally, data privacy and digital security issues emerge as critical concerns. Learning behavior data collection must employ high-level encryption and comply with personal data protection principles. There is also an urgent need for "Halal AI" standards—ethical frameworks ensuring AI algorithms uphold Islamic values and avoid theological deviations.

Handayani (2024) emphasizes that the future success of IRE depends on synergy between digital technologists and Islamic education experts in creating AI ecosystems that are intellectually advanced yet theologically safe.

#### IV. CONCLUSIONS

The transformation of the Indonesian Army's doctrine and This study concludes that Artificial Intelligence utilization in Islamic Religious Education is no longer optional but essential in addressing Generation Alpha's unique characteristics. Personalized learning through adaptive systems enhances students' cognitive effectiveness in understanding aqidah, fiqh, and Islamic history with greater precision. AI transforms static religious texts into dynamic, visual, and responsive learning experiences, enabling individualized learning paths without sacrificing authentic Islamic teachings.

However, AI's role remains fundamentally limited in spiritual and ethical domains. While AI excels in technical personalization and knowledge transfer (ta'lim), it cannot replace teachers' roles as murabbi in spiritual guidance (tazkiyatun nafs). Successful AI integration requires a hybrid model combining algorithmic efficiency with human moral exemplarity (uswah hasanah). Under proper supervision, AI serves as a means (wasilah) toward forming morally upright and technologically proficient Muslims in the era of artificial intelligence.

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