

Construction of Islamic AI Literacy Dimensions for The Development of Islamic Religious Education Curriculum

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Abstract

The integration of artificial intelligence (AI) in Islamic Religious Education (IRE) requires a conceptual framework for the development of a curriculum that is context sensitive and in harmony with ethical values and the Islamic education system. This is a challenge that is not only technological but also epistemic and ethical, because religious knowledge requires the validity of sources, contextual interpretation, scientific authority, and the guidance of teachers. This research aims to construct the dimensions of *Islamic AI Literacy* as the basis for the development of an adaptive IRE curriculum in the Islamic Religious Universities. This study uses a qualitative approach with an integrative literature study method. This method is used to critically synthesize various publications related to AI literacy, Islamic Religious Education, and curriculum development from 2020 to 2026. The results of the study show that *Islamic AI Literacy* consists of six operational dimensions: (1) information access literacy, (2) AI boundary literacy, (3) critical *prompting* literacy, (4) *digital tabayyun*, (5) academic integrity, and (6) literacy of scientific authority. These dimensions are based on Islamic principles such as *adab*, *amanah*, *adl*, *maslahah*, *tabayyun*, as well as *maqāsid al-shari'ah*, monotheism, and morality. The construction roadmap developed describes the four main stages of theoretical foundation, dimension identification, formulation of indicators and curriculum implications, and implementation and evaluation.

Keywords: Construction Dimensions, Islamic AI Literacy, Curriculum Development, Islamic Religious Education

INTRODUCTION

The development of artificial intelligence (AI) has brought about a major transformation in various aspects of life, including higher education. AI has changed the way students access information, construct arguments, and complete academic tasks. In the context of Islamic Religious Education (IRE) at Islamic higher education institutions, this transformation is not merely technological but also epistemic and ethical, because religious knowledge requires source validity, contextual interpretation, scholarly authority, and teacher guidance. Systematic literature reviews have extensively examined the impacts and challenges of generative AI in education, including those conducted by (Bahroun et al., 2023; Lo, 2023; Kasneci et al., 2023). Research by Syamsudduha et al. (2026) emphasizes that AI literacy in Islamic higher education must incorporate conceptual understanding, evaluative judgment, ethical engagement, and responsible AI-supported learning.

The emergence of generative AI (GenAI) has further reinforced the need for a literacy framework that is not only technical but also ethical and contextual. AI literacy has become an essential competency that students must possess in the 21st century. Various AI literacy frameworks have been developed.

to equip students with the knowledge, skills, and attitudes necessary to interact critically and responsibly with AI technology (Ng et al., 2021; Long & Magerko, 2020). Studies on academic and student perceptions of ChatGPT usage in higher education reveal significant concerns as well as optimism regarding its impact on academic integrity and the learning process (Alberth, 2023; Božić & Poola, 2023; Firat, 2023). On the other hand, AI also offers substantial opportunities for pedagogical innovation, for instance in developing academic writing skills and foreign language learning (Alharbi, 2023).

However, existing AI literacy frameworks are generally secular and have not specifically accommodated Islamic values and principles that serve as the foundation of education in Islamic higher education institutions. Bustillos et al. (2026) proposed a five-dimensional AI literacy framework for university educators including instrumental, algorithmic, ethical, epistemological, and institutional dimensions emphasizing that university educators must be capable of critically reviewing AI results, defending academic integrity, and working within a clear governance structure. Williams (2026) developed an integrated eight-dimension AI literacy framework for higher education teachers incorporating epistemic, legal governance, and emotional dimensions, providing human-centred oversight of responsible and ethical AI pedagogy. Wu and Huang (2026) synthesized 27 empirical studies to construct a future-adaptive faculty AI literacy framework, reframing AI literacy as a systemic pillar of digital academic professionalism. While these frameworks provide valuable foundations, they do not specifically address the unique epistemic and ethical considerations of Islamic higher education.

In the Indonesian context, Islamic higher education institutions face unique challenges in integrating AI into the curriculum. On one hand, there is a demand to keep up with technological developments so that graduates have global competitiveness. On the other hand, there is an obligation to maintain Islamic identity and ethical values that are characteristic of Islamic education. The tension between technological modernity and Islamic scholarly tradition requires an integrative and contextual approach. In Indonesia, research on digital literacy in Islamic higher education demonstrates that blended learning approaches and innovative curriculum integration are effective for embedding digital literacy into Islamic studies courses such as Ulumul Qur'an and Ulumul Hadits (Musanna et al., 2026). Research by Achruh et al. (2024) shows that Islamic higher education institutions face unique challenges in adopting AI-based education models due to technological limitations, digital literacy gaps, and regulatory constraints. Research by Huwaidah et al. (2026) shows that lecturer digital leadership has a positive and significant influence on student AI literacy, indicating the importance of strengthening digital competencies of lecturers to support the implementation of Islamic AI Literacy in Islamic higher education. The phenomenon of AI use in academic assignments within Islamic higher education generates a dilemma between easy access to information and the decline of academic ethics, requiring strengthening of honesty values, ethical digital literacy, and institutional policies aligned with scientific integrity and Islamic values.

The existing gap is the absence of an AI literacy framework specifically designed for the context of Islamic higher education in Indonesia. At the global level, data-driven and AI-based curriculum innovation has become a trend in higher education development; however, most frameworks have not specifically accommodated the epistemic needs of religious education (Abbasi et al., 2025; Chu & Ashraf, 2025). Research by Syamsudduha et al. (2026) has developed and validated the Artificial Intelligence Literacy Scale for Indonesian Islamic University Students (AILS-IIUS), which is based on the principles of *adab*, *amanah*, *'adl*, *maslahah*, and *tabayyun*. However, this scale is still limited to the aspect of measuring students' AI literacy

and has not been developed into a comprehensive curriculum framework. Research by Isti'ana (2026) formulated a digital-AI literacy culture framework for IRE consisting of six operational dimensions: information access literacy, AI limitation literacy, critical prompting literacy, digital *tabayyun*, academic integrity, and scholarly authority literacy. This research is still conceptual and requires further development to be implemented in the IRE curriculum within Islamic higher education.

Research by Waluyo et al. (2025) proposes a conceptual PAI-AI Trinity of Science model that integrates three main dimensions: epistemic (the ability to verify, validate, and contextualize AI-generated knowledge), ethical (application of *maqāṣid al-sharī'ah* principles and Islamic *adab*), and axiological (orientation of AI use for moral, beneficial, and sustainable educational purposes). Rohadi and Utami (2025) developed and validated an AI and GAI literacy framework aligned with the mission of Islamic higher education, with findings showing that AI literacy in this context must go beyond technical proficiency to include critical reflection and ethical integration. Suradji et al. (2025) developed and validated an AI-Integrated Curriculum Innovation Framework with an Islamic Perspective, which holistically integrates technological, pedagogical, ethical, and spiritual dimensions, demonstrating that Ethics & Governance and AI Literacy are major predictors of future adaptability and skills. Al Ihram & Raodah (2025) reconstructs Islamic digital ethics for AI use in a multidimensional model that integrates theological-philosophical, character-moral, critical-competency, and participatory-social dimensions. Research on Islamic Ethical Pedagogy by Ibrohim et al. (2026) introduces an integrated framework linking AI literacy, ethical governance, teacher agency, and Islamic educational values through the embedding of *ṣidq* (truthfulness), *amānah* (trustworthiness), responsibility, and *tabayyun* (critical verification).

The novelty of this research lies in the effort to construct Islamic AI Literacy dimensions comprehensively and systematically as a foundation for IRE curriculum development specifically for Islamic higher education institutions. This research not only identifies AI literacy dimensions in the Islamic context but also formulates how these dimensions can be integrated into the IRE curriculum operationally within Islamic higher education settings. This research bridges the gap between general AI literacy frameworks and the specific needs of Islamic higher education in Indonesia, as well as integrating various perspectives from previous research into a coherent and applicable framework.

Based on the description above, this study aims to: (1) identify and construct Islamic AI Literacy dimensions relevant to the context of Islamic Religious Education in Islamic higher education institutions; (2) formulate a conceptual Islamic AI Literacy framework that can serve as a foundation for IRE curriculum development in Islamic higher education; and (3) provide recommendations for implementing Islamic AI Literacy dimensions in the IRE curriculum at Islamic higher education institutions. This research is expected to serve as a reference for developing an IRE curriculum that is adaptive to technological disruption yet remains rooted in Islamic values.

METHOD

Research Design

This study employs a qualitative integrative literature review design. An integrative literature review enables the critical analysis and synthesis of diverse bodies of literature to generate new conceptual frameworks and theoretical insights (Whittemore & Knafl, 2005). This methodology was selected for its capacity to bridge interdisciplinary perspectives specifically harmonizing artificial intelligence (AI) literacy, Islamic pedagogy, and higher education curriculum development.

Search Strategy and Eligibility Criteria

A systematic literature search was conducted across prominent academic databases, including Scopus, Google Scholar, Crossref, and Garuda (Garba Rujukan Digital), targeting publications released between 2020 and 2026. The search strategy utilized targeted keywords combined with Boolean operators: *("AI literacy" OR "Islamic AI literacy") AND ("Islamic education" OR "PAI curriculum" OR "Islamic higher education") AND ("digital tabayyun" OR "AI literacy framework")*.

To ensure methodological rigor, literature selection was guided by predefined criteria:

1. Inclusion Criteria: (1) Peer-reviewed literature examining AI literacy within higher education, (2) studies addressing Islamic Religious Education (PAI) in higher education settings, (3) research focusing on technology-driven curriculum innovation in Islamic higher education, (4) publications in English or Indonesian, and (5) open-access or fully accessible documents.
2. Exclusion Criteria: (1) Non-peer-reviewed commentary or opinion pieces, (2) duplicate entries, (3) studies lacking relevant empirical or theoretical focus, and (4) articles without full-text availability.

Data Extraction and Synthesis

Data were analyzed following Braun and Clarke's (2006) thematic analysis framework, embedded within Whittemore and Knafl's (2005) five-stage review process: (1) problem identification, (2) literature search, (3) data evaluation, (4) thematic analysis (data abstraction and coding), and (5) conceptual synthesis. Initial codes were generated iteratively, clustered into central themes, and synthesized into an integrated conceptual framework.

Rigor and Trustworthiness

Methodological rigor and trustworthiness were maintained according to Lincoln and Guba's (1985) criteria:

1. Credibility: Achieved through data source triangulation (incorporating various empirical and conceptual studies) and expert debriefing with specialists in Islamic education and digital technology.
2. Dependability and Confirmability: Established through a comprehensive audit trail documenting every stage of literature search, selection, extraction, and synthesis.
3. Reflexivity: Continuously practiced by the research team to identify and mitigate potential subjective biases during qualitative interpretation.

RESULT AND DISCUSSION

Dimensions of Islamic AI Literacy

Based on the thematic analysis results of various relevant literatures, this study identified six interrelated dimensions of Islamic AI Literacy that form a comprehensive framework specifically designed for Islamic higher education contexts. These six dimensions are: (1) information access literacy, (2) AI limitation literacy, (3) critical prompting literacy, (4) digital *tabayyun*, (5) academic integrity, and (6) scholarly authority literacy. Each dimension has specific indicators and implications for IRE curriculum development in Islamic higher education institutions.

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Table 1. Dimensions of Islamic AI Literacy

No	Dimension	Operational Definition	Underlying Islamic Principles
1	Information Access Literacy	Ability to access, search, and utilize AI-based information effectively and efficiently	' <i>Adl</i> ' (justice of access), <i>Maslahah</i> (public interest)
2	AI Limitation Literacy	Understanding of the limitations, weaknesses, and potential biases in AI systems	<i>Amanah</i> (responsibility), <i>Tabayyun</i> (verification)
3	Critical Prompting Literacy	Ability to formulate questions/commands (prompts) critically and effectively to AI systems	<i>Adab</i> (communication ethics), Akhlak (morals)
4	Digital <i>Tabayyun</i>	Ability to verify, clarify, and validate AI-generated information	<i>Tabayyun</i> (clarification), ' <i>Adl</i> ' (justice)
5	Academic Integrity	Commitment to honesty, transparency, and ethics in using AI for academic tasks	<i>Amanah</i> (trust), Akhlak (morals)
6	Scholarly Authority Literacy	Ability to distinguish and appreciate human scholarly authority versus AI output in the context of Islamic knowledge	<i>Adab</i> (respect for ulama), <i>Maslahah</i> (public interest)

Islamic AI Literacy Construction Roadmap

To provide a more systematic overview of the construction process of Islamic AI Literacy dimensions for Islamic higher education, this research presents a roadmap that illustrates the development flow of the framework from theoretical foundations to curriculum implementation. This roadmap is compiled based on the synthesis of various contemporary AI literacy frameworks and Islamic educational principles identified in the literature review.

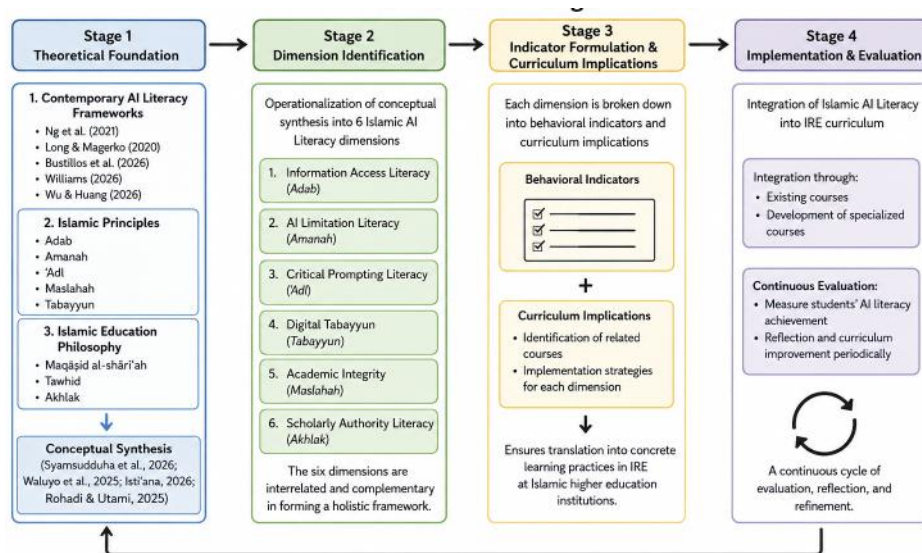


Figure 1. Islamic AI Literacy Construction Roadmap for IRE Curriculum Development in Islamic Higher Education

The Islamic AI Literacy construction roadmap above illustrates four main stages in developing an Islamic-based AI literacy framework for the IRE curriculum in Islamic higher education.

Stage 1: Theoretical Foundation is the initial stage that integrates three main pillars: (1) contemporary AI literacy frameworks developed by experts such as Ng et al. (2021) and Long & Magerko (2020), which include conceptual understanding, usage, evaluation, and AI ethics, as well as more recent frameworks by Bustillos et al. (2026) incorporating instrumental, algorithmic, ethical, epistemological, and institutional dimensions, Williams (2026) with eight core dimensions including foundational knowledge, pedagogical integration, critical evaluation, innovation, ethical, epistemic, legal and institutional governance, and Wu & Huang (2026) with six dimensions anchored in Boyer's scholarship model; (2) Islamic principles such as *adab*, *amanah*, *adl*, *maslahah*, and *tabayyun*, which serve as the ethical foundation for technology utilization; and (3) Islamic education philosophy encompassing *maqāṣid al-sharī'ah*, tawhid, and akhlak as the highest value framework. These three pillars are conceptually synthesized through integrative study of various previous research (Syamsudduha et al., 2026; Waluyo et al., 2025; Isti'ana, 2026; Rohadi & Utami, 2025).

Stage 2: Dimension Identification is the stage where the results of conceptual synthesis are operationalized into six interrelated Islamic AI Literacy dimensions. These six dimensions are information access literacy, AI limitation literacy, critical prompting literacy, digital *tabayyun*, academic integrity, and scholarly authority literacy. Each dimension has a specific Islamic principle foundation and complements each other in forming a holistic framework.

Stage 3: Indicator Formulation and Curriculum Implications is the stage where each dimension is broken down into behavioral indicators that can be observed and measured in the context of IRE learning at Islamic higher education institutions. At this stage, curriculum implications are also formulated in the form of identification of related courses and implementation strategies for each dimension, as presented in Table 2. This stage ensures that the conceptual framework can be translated into concrete learning practices within Islamic higher education settings.

Stage 4: Implementation and Evaluation is the final stage that includes the integration of Islamic AI Literacy dimensions into the IRE curriculum at Islamic higher education institutions, both through existing courses and the development of specialized courses. This stage also includes continuous evaluation to measure students' AI literacy achievement and to conduct reflection and curriculum improvement periodically. The roadmap shows that the construction of Islamic AI Literacy is not a linear and finished process, but a continuous cycle that requires ongoing evaluation and refinement.

Information Access Literacy

The first dimension, information access literacy, refers to students' ability to access, search, and utilize AI-based information effectively and efficiently in the context of IRE learning at Islamic higher education institutions. This dimension includes technical skills in using various AI platforms and tools, as well as the ability to navigate an increasingly complex digital information landscape. This competency is not merely technical but also encompasses an understanding of authoritative Islamic knowledge sources and how to evaluate the credibility of digital information, as discussed in the e-learning success model which emphasizes the importance of information quality and user satisfaction (Al-Fraihat et al., 2020). The use of verification tools such as Scite, designed to examine scientific claims, is also an important part of information access literacy in the AI era (deLaubell, 2023). In the IRE context at Islamic higher education, information access literacy includes not only technical skills but also an understanding of authoritative sources of Islamic knowledge. Students need to be trained to distinguish between valid and invalid Islamic sources and to understand how AI can help or hinder access to authentic Islamic knowledge. Research on digital literacy in Islamic higher education instruction reveals that while participants demonstrate strong proficiency in basic digital skills such as word processing and internet navigation, they show limited competence in advanced

skills, including digital content creation and critical evaluation of digital sources. The principles of *'adl* (justice) and *maslahah* (public interest) serve as the ethical foundation in this dimension, because access to information must be just and beneficial for all students in Islamic higher education.

The second dimension, AI limitation literacy, refers to students' understanding of the limitations, weaknesses, and potential biases in AI systems. This dimension includes awareness that AI is not perfect, can produce incorrect or biased information, and has limitations in understanding context and nuance, especially in matters related to religion and morality. Research by Syamsudduha et al. (2026) shows that one important dimension of Islamic AI Literacy is the ability to critically evaluate AI output. Students need to understand that AI can produce hallucinations (convincingly fabricated false information) and biases that can affect their understanding of Islamic teachings. The principles of *amanah* (responsibility) and *tabayyun* (verification) serve as the ethical foundation in this dimension, because students are responsible for verifying AI-generated information before using it.

Critical Prompting Literacy

The third dimension, critical prompting literacy, refers to students' ability to formulate questions or commands (prompts) critically and effectively to AI systems. This dimension includes skills in formulating specific, relevant, and ethical questions, as well as the ability to evaluate and improve prompts based on the output produced. The quality of interaction between students and AI significantly influences learning outcomes; research demonstrates that AI output quality and the way students interact with it have a significant impact on their motivation and conceptual understanding (Bai & Wang, 2025). In the IRE context at Islamic higher education, critical prompting literacy is very important because the quality of questions posed to AI will greatly affect the quality of answers obtained. Students need to be trained to formulate questions that are not only informative but also ethical and in line with Islamic values. Research by Adara et al. (2026) on ethical integration of generative AI in Islamic higher education demonstrates that when AI is employed without sufficient pedagogical guidance, higher-order skills including critical thinking, idea development, and appropriate use of references can decline. The principles of *adab* (communication ethics) and *akhlak* (morals) serve as the ethical foundation in this dimension, because the way students communicate with AI reflects their character and personality as Muslims.

Digital Tabayyun

The fourth dimension, digital *tabayyun*, refers to students' ability to verify, clarify, and validate AI-generated information before accepting and using it. This dimension is an adaptation of the concept of *tabayyun* in Islam, which means an effort to seek clarity and truth before making a decision or taking action. In the context of the post-truth era and the proliferation of disinformation on social media, the application of digital *tabayyun* becomes increasingly crucial for filtering AI-generated information as well as content circulating on digital platforms, as comprehensively discussed from an Islamic education perspective by (Latifah et al., 2026). Research by Isti'ana (2026) emphasizes that digital *tabayyun* transforms *tabayyun* from a moral recommendation into an observable and measurable academic procedure. In the IRE context at Islamic higher education, digital *tabayyun* includes concrete steps such as checking information sources, comparing with authoritative sources, consulting with teachers or ulama, and using various verification tools. The principles of *tabayyun* (clarification) and *'adl* (justice) serve as the ethical foundation in this dimension, as affirmed in QS. Al-Hujurat (49): 6, which commands to practice *tabayyun* when receiving information. Research on Islamic communication strategies in facing AI disinformation shows that the application of

Islamic communication principles such as *tabayyun* (religious inquiry) and *qaulan sadidan* (verification of information) can strengthen digital literacy and encourage critical thinking.

Academic Integrity

The fifth dimension, academic integrity, refers to students' commitment to honesty, transparency, and ethics in using AI for academic tasks. This dimension includes understanding the ethical boundaries in using AI to complete tasks, the obligation to cite sources, and responsibility for the resulting work. Recent research on academic integrity policies in the AI era emphasizes that faculties and institutions need to develop clear and comprehensive policies to regulate AI usage in academic assignments, while simultaneously providing education on responsible practices (Alsharefeen & Al Sayari, 2025).

Meanwhile, detecting AI-generated content poses a separate challenge for educators, as detection tools often show varying performance and are not yet fully accurate (Chaka, 2024). Research by Syamsudduha et al. (2026) emphasizes that ethics is one of the important dimensions in Islamic AI Literacy. Students need to understand that AI use in an academic context must be carried out with full responsibility and in accordance with Islamic values. The principles of *amanah* (trust) and *akhlak* (morals) serve as the ethical foundation in this dimension. Research by Ismail et al. (2025) shows that both ChatGPT and Scite AI significantly contribute to increased plagiarism tendencies among Islamic education students, with ChatGPT demonstrating a markedly stronger effect. This research enriches academic integrity literature by positioning AI tool typology particularly the distinction between generative and verification tools as a critical predictor of plagiarism behavior. Research by Adiyono et al. (2025) shows that unethical AI use can lead to decreased academic integrity and limited critical reflection. Research on the phenomenon of AI use in academic assignments within Islamic higher education reveals that the tendency to copy results without deep understanding potentially decreases critical thinking skills and violates academic honesty principles. Research by Al Ihram & Raodah (2025) reconstructs Islamic digital ethics in a multidimensional model that integrates the character-moral dimension through the operationalization of *adab* and *akhlak* values in concrete digital behavior.

Scholarly Authority Literacy

The sixth dimension, scholarly authority literacy, refers to students' ability to distinguish and appreciate human scholarly authority versus AI output in the context of Islamic knowledge. This dimension includes understanding that AI cannot replace the authority of ulama and classical Islamic sources, as well as the ability to identify when and how to use AI as a tool in IRE learning at Islamic higher education. Research by Waluyo et al. (2025) emphasizes that the epistemic dimension in the PAI-AI Trinity of Science framework includes the ability to trace scholarly chains of transmission and source validity. The principles of *adab* (respect for ulama) and *maslahah* (public interest) serve as the ethical foundation in this dimension, because students need to respect the scholarly authority of ulama and use AI only for benefit, not to replace the role of ulama. Research on generative AI in Islamic education highlights that overreliance on AI erodes traditional scholarly authority (*sanad*) and human moral agency (*taklif*). The study by Budiyanto et al. (2025) on transforming Islamic and moral education with generative AI concludes that semi-supervised generative AI offers significant opportunities for pedagogical innovation and improved moral reasoning.

Integration of Dimensions in the Islamic AI Literacy Framework

The findings of this research show that Islamic AI Literacy is not merely AI literacy combined with Islamic values, but an integrative framework that fundamentally changes the way of understanding and using AI in the context of Islamic education at Islamic higher education institutions. As emphasized by

Syamsudduha et al. (2026), AI literacy in Islamic higher education must include conceptual understanding, evaluative assessment, ethical engagement, and responsible AI-assisted learning. The six dimensions identified in this research form an interrelated and mutually reinforcing framework, as illustrated in the roadmap above.

The Islamic AI Literacy framework proposed in this research has advantages over conventional AI literacy frameworks because it explicitly accommodates Islamic values and principles. Research by Waluyo et al. (2025) emphasizes that AI literacy in Islamic education must go beyond technical skills and include moral character development aligned with Islamic values. Principles such as *adab*, *amanah*, *'adl*, *maslahah*, *tabayyun*, *maqāṣid al-sharī'ah*, tawhid, and akhlak serve as the ethical foundation that distinguishes Islamic AI Literacy from general AI literacy. The integration between Islamic AI Literacy dimensions also reflects the holistic approach that is characteristic of Islamic education, as explained by research on AI-integrated curriculum innovation frameworks with Islamic perspectives that holistically integrate technological, pedagogical, ethical, and spiritual dimensions. Research on AI, ethics, and Islamic higher education concludes that Islamic higher education institutions have the potential to pioneer an Islamic framework for ethical AI integration. Research by Suradji et al. (2025) demonstrates strong construct validity for an AI-Integrated Curriculum Framework with an Islamic Perspective, with Ethics & Governance and AI Literacy as major predictors of future adaptability and skills.

Implementation of Islamic AI Literacy Dimensions in the IRE Curriculum at Islamic Higher Education

Implementation of Islamic AI Literacy dimensions in the IRE curriculum at Islamic higher education institutions requires a systematic and gradual approach. Research on AI literacy curriculum implementation in Islamic education institutions emphasizes the importance of a gradual approach, with the hope of creating a generation that is not only skilled in technology but also moral and ethical. In the higher education context, implementation can begin by integrating Islamic AI Literacy dimensions into existing courses before developing them into specialized courses. Regionally, the ethical and pedagogical challenges in utilizing ChatGPT in ASEAN higher education are also relevant to the Indonesian context, particularly regarding infrastructure gaps and human resource readiness (Buragohain & Chaudhary, 2025). Furthermore, teacher or lecturer readiness in adopting new technology is a key factor in successful curriculum implementation; research indicates that teacher technology change is significantly influenced by beliefs, competencies, and institutional support (Ertmer & Ottenbreit-Leftwich, 2010).

Research by Achruh et al. (2024) identifies that the main challenges in AI adoption in Islamic education include limited AI teacher competency, inadequate infrastructure, and ethical concerns regarding the preservation of Islamic values. Research by Huwaidah et al. (2026) shows that lecturer digital leadership has a positive and significant influence on student AI literacy ($\beta = 0.550$, $p < 0.001$), contributing 30.3% to the variance, indicating the importance of strengthening digital competencies of lecturers to support the implementation of Islamic AI Literacy at Islamic higher education institutions. Research by Adara et al. (2026) demonstrates the importance of thoughtfully integrating AI in Islamic higher education to promote both academic proficiency and ethical responsibility.

Table 2. Recommendations for Implementing Islamic AI Literacy Dimensions in the IRE Curriculum at Islamic Higher Education

Dimension	Related Courses	Implementation Strategies
Information	Methodology of Islamic	Digital information search training, introduction
Access Literacy	Studies, Introduction to Islamic Studies	to Islamic databases, ethics of information access

AI Limitation Literacy	Ulumul Qur'an, Ulumul Hadis, <i>Fiqh</i>	Critical analysis of AI output on <i>tafsir</i> , <i>hadith</i> , and <i>fiqh</i> ; identification of bias and hallucinations
Critical Prompting Literacy	<i>Tafsir</i> , Hadis, <i>Fiqh</i> , Akhlak	Practice in formulating critical questions on Islamic issues; evaluation of prompt and output quality
Digital <i>Tabayyun</i>	Methodology of Islamic Studies, Akhlak	Source verification training; use of verification tools; consultation with ulama/teachers
Academic Integrity	Akhlak, Methodology of Islamic Studies	Socialization of academic ethics; transparency in AI use; sanctions for violations
Scholarly Authority Literacy	History of Islamic Civilization, Methodology of Islamic Studies	Understanding the hierarchy of Islamic scholarly authority; AI's role as a tool, not a substitute for ulama

Implementation of information access literacy in the IRE curriculum at Islamic higher education can be done through digital information search training and introduction to Islamic databases. Students need to be equipped with skills to access and utilize various Islamic information sources, including digital and AI-based sources, while paying attention to Islamic ethics and values. Research on digital literacy in Islamic higher education instruction reveals that blended learning emerged as an effective pedagogical strategy for embedding digital literacy into Islamic studies courses, particularly in *Ulumul Qur'an* and *Ulumul Hadits*. AI limitation literacy can be implemented through critical analysis of AI output on Islamic issues. Students need to be trained to identify potential bias and hallucinations in AI output, as well as to understand AI's limitations in understanding the context and nuances of Islamic teachings.

Critical prompting literacy can be implemented through practice in formulating critical questions on Islamic issues and evaluating the quality of prompts and resulting outputs. Students need to be trained to formulate specific, relevant, and ethical questions, as well as to improve prompts based on the output obtained. Digital *tabayyun* can be implemented through source verification training, use of verification tools, and consultation with ulama or teachers. Students need to be trained not to immediately accept AI-generated information without verification, but to always check and clarify as affirmed in QS. Al-Hujurat (49): 6.

Academic integrity can be implemented through the socialization of academic ethics in AI use, transparency in AI use, and enforcement of sanctions for violations. Students need to understand the ethical boundaries in using AI for academic tasks and the obligation to cite sources. Research by Ismail et al. (2025) calls for differentiated AI literacy strategies in Islamic higher education, advocating for the integration of *adab al-'ilmu* (ethics of knowledge) into digital literacy curricula to foster moral discernment and responsible technology use among future religious educators. Scholarly authority literacy can be implemented through understanding the hierarchy of Islamic scholarly authority and AI's role as a tool, not a substitute for ulama. Students need to understand that final decisions about the truth of an Islamic teaching must refer to authoritative sources and that AI is merely a tool that cannot replace the authority of ulama. Research on future-proofing Arabic studies in Islamic higher education proposes a strategic AI competency framework emphasizing human-centred thinking and AI Ethics as a moral guardrail aligned with Islamic principles.

Challenges and Opportunities for Implementation in Islamic Higher Education

The implementation of Islamic AI Literacy dimensions in the IRE curriculum at Islamic higher education institutions faces various challenges and opportunities. One of the main challenges is the digital

literacy gap among lecturers and students. Research by Achruh et al. (2024) shows that Islamic higher education institutions face unique challenges in adopting AI-based education models due to technological limitations, digital literacy gaps, and regulatory constraints. Therefore, comprehensive training for lecturers and adequate technological infrastructure development are needed. Research by Huwaidah et al. (2026) reveals that although students perceive lecturers' digital leadership as high, their level of AI literacy remains moderate, indicating a gap between technological exposure and actual competence. Research by Syamsudduha et al. (2026) found that the frequency of AI use significantly predicts all dimensions of AI literacy, highlighting the importance of encouraging appropriate AI engagement.

Another challenge is resistance to change and concerns about the impact of AI on scholarly authority and academic integrity. Research on generative AI in Islamic education highlights that it simultaneously threatens epistemological integrity through the proliferation of semantic inaccuracies, "hallucinated" jurisprudence, and overreliance that erodes traditional scholarly authority (*sanad*) and human moral agency (*taklif*). Research on the phenomenon of AI use in academic assignments within Islamic higher education identifies that students are aware of plagiarism risks yet continue using AI excessively due to the absence of clear institutional regulations. Research by Jiyad and Yunita (2026) identifies significant gaps in AI literacy among IRE teachers and proposes systematic frameworks for methodologically integrating AI into IRE learning, emphasizing the importance of Islamic studies methodology as the main epistemological foundation, while AI serves as an instructional support tool.

Implementation opportunities lie in the increasing awareness of the importance of AI literacy and the availability of various resources and tools that can support AI integration into the IRE curriculum at Islamic higher education. Research by Rohadi & Utami (2025) shows that developing and validating an AI and GAI literacy framework aligned with the mission of Islamic higher education can be an important first step. Research by Al Ihram & Raodah (2025) shows that the multidimensional Islamic digital ethics model can serve as a guide for developing curricula adaptive to technological developments. Research by Suradji et al. (2025) demonstrates that the AI-Integrated Curriculum Framework has the potential to revitalize academic governance, strengthen digital literacy, and establish an adaptive, ethical, and sustainable learning ecosystem in higher education institutions. Research by Huwaidah et al. (2026) shows that lecturer digital leadership is a key factor in improving student AI literacy, indicating the importance of developing digital leadership competencies among lecturers at Islamic higher education institutions. Research on AI, ethics, and Islamic higher education concludes that Islamic higher education institutions have the potential to pioneer an Islamic framework for ethical AI integration. Research on Maqasid al-Shariah and AI education demonstrates that Maqasid-driven approaches can alleviate common issues in educational finance, promote digital inclusion, and enable an ethical implementation of AI in Muslim societies.

CONCLUSION

Islamic AI Literacy is an integrative framework consisting of six operational dimensions specifically designed for Islamic higher education contexts: information access literacy, AI limitation literacy, critical prompting literacy, digital *tabayyun*, academic integrity, and scholarly authority literacy. These six dimensions are grounded in Islamic principles such as *adab*, *amanah*, *'adl*, *maslahah*, *tabayyun*, *maqāṣid al-sharī'ah*, *tawhid*, and *akhlak*. The construction roadmap developed illustrates four main stages: theoretical foundation, dimension identification, formulation of indicators and curriculum implications, and implementation and evaluation demonstrating that the development of this framework is a continuous cyclical process. This framework is expected to serve as a reference for developing an IRE curriculum in Islamic higher education that is adaptive to technological disruption yet remains rooted in Islamic values.

IRE curriculum developers at Islamic higher education institutions are advised to integrate Islamic AI Literacy dimensions gradually into existing courses. IRE lecturers need to enhance their AI literacy competencies and serve as role models in applying Islamic AI Literacy principles. Future researchers are advised to conduct empirical research on the implementation of this framework, including the development of measurement instruments and curriculum trials. Policymakers need to develop policies that support the integration of AI literacy into the IRE curriculum at Islamic higher education institutions, including providing technological infrastructure and training for lecturers.

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REFERENCES

- Abbasi, B. N., Wu, Y., & Luo, Z. (2025). Exploring the impact of artificial intelligence on curriculum development in global higher education institutions. *Education and Information Technologies*, 30(1). <https://doi.org/10.1007/s10639-024-13113-z>
- Achruh, R., Rapi, M., Rusdi, M., & Idris, R. (2024). Challenges and opportunities of artificial intelligence adoption in Islamic education in Indonesian higher education institutions. *International Journal of Learning, Teaching and Educational Research*, 23(11), 423–443. <https://doi.org/10.26803/ijlter.23.11.22>
- Adara, R. A., Victorynie, I., Hidayati, I. N., Rosyid, A., & Hidayati, P. S. (2026). Ethical integration of generative AI and students' motivation in academic writing: An exploratory practice in an Islamic higher education context. *Register Journal*, 19(1), 173–195. <https://doi.org/10.18326/register.v19i1.173-195>
- Adiyono, A., Suwartono, T., Nurhayati, S., Dalimarta, F. F., & Wijayanti, O. (2025). Impact of artificial intelligence on student reliance for exam answers: A case study in IRCT Indonesia. *International Journal of Learning, Teaching and Educational Research*, 24(3), 455–479. <https://doi.org/10.26803/ijlter.24.3.22>
- Al Ihram, N., & Raodah, A. (2025). Rekonstruksi etika digital berbasis pendidikan Islam di era artificial intelligence. *Al-Ilmiya: Jurnal Pendidikan Islam*, 2(1), 185–194. <https://doi.org/10.65118/alim.v2i1.43>
- Alberth. (2023). The use of ChatGPT in academic writing: A blessing of a curse in disguise? *TEFLIN Journal*, 34(2), 337–352. <https://doi.org/10.15639/teflinjournal.v34i2/337-352>
- Al-Fraihat, D., Joy, M., Masa'deh, R., & Sinclair, J. (2020). Evaluating e-learning systems success: An empirical study. *Computers in Human Behavior*, 102, 67–86. <https://doi.org/10.1016/j.chb.2019.08.004>
- Alharbi, W. (2023). AI in the foreign language classroom: A pedagogical overview of automated writing assistance tools. *Education Research International*, 2023. <https://doi.org/10.1155/2023/4253331>
- Alsharefeen, R., & Al Sayari, N. (2025). Examining academic integrity policy and practice in the era of AI: A case study of faculty perspectives. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1621743>
- Bahrour, Z., Anane, C., Ahmed, V., & Zacca, A. (2023). Transforming education: A comprehensive review of generative artificial intelligence in educational settings through bibliometric and content analysis. *Sustainability*, 15(17), 12983. <https://doi.org/10.3390/su151712983>
- Bai, Y., & Wang, S. (2025). Impact of generative AI interaction and output quality on university students' learning outcomes: A technology-mediated and motivation-driven approach. *Scientific Reports*, 15(1), 24054. <https://doi.org/10.1038/s41598-025-08697-6>

- Božić, V., & Poola, I. (2023). *Chat GPT and education* [Preprint]. OSF Preprints. <https://doi.org/10.31217/osf.io/8xgj6>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Budiyanto, B., Adiyono, A., & Dalimarta, F. (2025). Transforming Islamic and moral education with generative AI: A statistical systematic review. *SYAMIL: Journal of Islamic Education*, 13(3), 337–352. <https://doi.org/10.21093/sy.v13i3.11935>
- Buragohain, D., & Chaudhary, S. (2025). Navigating ChatGPT in ASEAN higher education: Ethical and pedagogical perspectives. *Computer Applications in Engineering Education*, 33(4). <https://doi.org/10.1002/cae.70062>
- Bustillos, M. A., Quintero, Y. J., Luengo, D. A., & Colmenárez, M. C. (2026). An epistemic-institutional artificial intelligence literacy framework for university educators. *Frontiers in Education*, 11. <https://doi.org/10.3389/feduc.2026.1848737>
- Chaka, C. (2024). Reviewing the performance of AI detection tools in differentiating between AI-generated and human-written texts: A literature and integrative hybrid review. *Journal of Applied Learning & Teaching*, 7(1), 115–126. <https://doi.org/10.37074/jalt.2024.7.1.14>
- Chu, T. S., & Ashraf, M. (2025). Artificial intelligence in curriculum design: A data-driven approach to higher education innovation. *Knowledge*, 5(3), 14. <https://doi.org/10.3390/knowledge5030014>
- deLaubell, L. (2023). Scite. *The Charleston Advisor*, 24(4), 60–63. <https://doi.org/10.5260/chara.24.4.60>
- Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). Teacher technology change. *Journal of Research on Technology in Education*, 42(3), 255–284. <https://doi.org/10.1080/15391523.2010.10782551>
- Firat, M. (2023). What ChatGPT means for universities: Perceptions of scholars and students. *Journal of Applied Learning & Teaching*, 6(1). <https://doi.org/10.37074/jalt.2023.6.1.22>
- Huwaidah, N., Yoenanto, N. H., Fajruddin, M. N., & Fauziana, S. P. (2026). Digital leadership dosen dan AI literacy mahasiswa: Studi pada Program Studi Manajemen Pendidikan Islam. *Al-Idarah: Jurnal Kependidikan Islam*, 16(1). <https://doi.org/10.24042/6f366030>
- Ibrohim, W. M., Aziz, A., & Sahrodi, J. (2026). Islamic ethical pedagogy for artificial intelligence use: Insights from Islamic religious education teachers in Indonesia. *Journal of Islamic Education Research*, 7(4), 593–610. <https://doi.org/10.35719/jier.v7i4.589>
- Ismail, I., Suja'i, S., & Hasanah, S. (2025). Assessing artificial intelligence plagiarism risk: ChatGPT vs Scite among Islamic education students. *Ta'dib*, 28(2). <https://doi.org/10.31958/jt.v28i2.16117>
- Isti'ana, A. (2026). Budaya literasi digital-AI dalam Pendidikan Agama Islam: Penguatan tabayyun digital dan integritas akademik. *Sakalima: Jurnal Pendidikan Agama Islam*, 3(1). <https://doi.org/10.70211/sakalima.v3i1.644>
- Jiyad, A., & Yunita, N. (2026). Metodologi studi Islam dalam pemanfaatan AI bagi guru rumpun PAI di MI. *Al-Azkiya: Jurnal Pendidikan MI/SD*, 11(1), 59–82. <https://doi.org/10.32505/2jps9t56>
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., ... Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
- Latifah, L., Anwar, K., & Masuud, M. A. (2026). Artificial intelligence, social media, and post-truth: An Islamic education perspective. *Al-Mudarris: Jurnal Ilmiah Pendidikan Islam*, 9(2), 245–264. <https://doi.org/10.23971/mdr.v9i2.11422>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.

- Lo, C. K. (2023). What is the impact of ChatGPT on education? A rapid review of the literature. *Education Sciences*, 13(4), 410. <https://doi.org/10.3390/educsci13040410>
- Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, 1–16. <https://doi.org/10.1145/3313831.3376727>
- Musanna, A., Herwanis, D., Zakaria, R., & Wahyuni, S. (2026). Digital literacy in Islamic higher education instruction: Exploring innovative approaches to curriculum integration. *Pajar: Jurnal Pendidikan dan Riset*, 10(2). <https://doi.org/10.33578/pjr.v10i2.1099>
- Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. *Computers and Education: Artificial Intelligence*, 2, 100041. <https://doi.org/10.1016/j.caeai.2021.100041>
- Rohadi, T., & Utami, D. S. (2025). Developing an AI and generative AI literacy framework: A lesson from an Islamic higher education institution. *Journal of Language and Literature Studies*, 5(4), 1077–1086. <https://doi.org/10.36312/7tjb1p58>
- Suradji, M., Khozin, K., & Faridi, F. (2025). Designing an AI-integrated curriculum innovation framework for higher education. *Edukasi Islami: Jurnal Pendidikan Islam*, 14(4). <https://doi.org/10.30868/ei.v14i04.9215>
- Syamsudduha, S., Suwandi, S., & ZA, T. (2026). Islamic AI literacy as responsible knowledge practice: Development and validation of AILS-IIUS in Indonesian Islamic higher education. *Jurnal Pendidikan Islam*, 12(1), 187–201. <https://doi.org/10.15575/jpi.v12i1.54254>
- Waluyo, Khomsin, & Khoiri, T. (2025). PAI-AI Trinity of Knowledge: An examination of artificial intelligence in Islamic religious education through the lens of the philosophy of science. *Wahana Akademika*, 12(2). <https://doi.org/10.21580/wa.v12i2.28574>
- Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of Advanced Nursing*, 52(5), 546–553. <https://doi.org/10.1111/j.1365-2648.2005.03621.x>
- Williams, A. (2026). An integrated AI literacy framework for higher-education teachers: A critical review and conceptual synthesis. *Cogent Education*, 13(1), 2698137. <https://doi.org/10.1080/2331186X.2026.2698137>
- Wu, Y., & Huang, Y. (2026). Faculty AI literacy in higher education systems: A systematic review and future-adaptive framework. *Interactive Learning Environments*. <https://doi.org/10.1080/10494820.2026.2648739>