

PAI-AI Trinity of Knowledge: An Examination of Artificial Intelligence in Islamic Religious Education through the Lens of the Philosophy of Science

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DOI: 10.21580/wa.v12i2.28574

Abstract

A conceptual model that operationally combines contemporary artificial intelligence (AI) literacy with the philosophical framework of Islamic science for the context of religious learning does not yet exist. This research aims to develop a conceptual framework between PAI and AI from the perspective of the Philosophy of Science. The research method is by conducting a structured literature review (scoping review) followed by conceptual synthesis using triangulation analysis. The results of the research resulted in a conceptual framework of the PAI-AI Trinity of Science that integrates three main dimensions. First, epistemic, which is the ability to verify, validate, and contextualize AI-generated knowledge in the sharia corridor, including tracking scientific sanad and source validity. Second, ethics, namely the application of the principles of maqasid al-shariah and Islamic manners in AI human interaction, which includes the protection of human benefits, justice, and honor. Third, axiology, which is the orientation of the use of AI for moral, useful, and sustainable educational purposes according to the vision of Islamic education. In conclusion, the unification of the philosophical tradition of Islamic science with AI literacy and explainable AI (xAI) in education can be translated into

curriculum competency design that includes aspects of knowledge, skills, and attitudes; management of digital tools and resources; and a sustainable evaluative research agenda. This framework is expected to be a reference for the development of an Islamic Religious Education curriculum that is adaptive to technological disruptions, but still rooted in Islamic scientific values and principles.

Keywords: Artificial Intelligent, Curriculum, Islamic Religious Education, Maqasid Shariah, Philosophy of Islamic Science.

Abstrak

Model konseptual yang secara operasional memadukan literasi kecerdasan buatan (AI) kontemporer dengan kerangka filsafat ilmu Islam untuk konteks pembelajaran agama belum ada. Penelitian ini bertujuan mengembangkan kerangka konseptual antara PAI dan AI perspektif Filsafat Ilmu. Metode penelitian dengan melakukan telaah pustaka terstruktur (scoping review) yang dilanjutkan dengan sintesis konseptual menggunakan analisis triangulasi. Hasil penelitian menghasilkan kerangka konseptual PAI-AI Trinitas Ilmu yang mengintegrasikan tiga dimensi utama. Pertama, epistemik, yaitu kemampuan memverifikasi, memvalidasi, dan mengkontekstualisasi pengetahuan yang dihasilkan AI dalam koridor syar'i, termasuk pelacakan sanad keilmuan dan validitas sumber. Kedua, etik, yakni penerapan prinsip maqasid al-shariah dan adab Islam dalam interaksi manusia AI, yang mencakup perlindungan nilai kemaslahatan, keadilan, dan kehormatan manusia. Ketiga, aksiologis, yaitu orientasi pemanfaatan AI untuk tujuan pendidikan yang bermoral, bermanfaat, dan berkelanjutan sesuai visi pendidikan Islam. Kesimpulannya, penyatuan tradisi filsafat ilmu Islam dengan literasi AI dan explainable AI (xAI) dalam pendidikan dapat diterjemahkan ke dalam desain kompetensi kurikulum yang mencakup aspek pengetahuan, keterampilan, dan sikap; pengelolaan tata kelola alat dan sumber daya digital; serta agenda riset evaluatif yang berkelanjutan. Kerangka ini diharapkan menjadi acuan bagi pengembangan kurikulum Pendidikan Agama Islam yang adaptif terhadap disrupsi teknologi, namun tetap berakar pada nilai-nilai dan prinsip keilmuan Islam.

Kata kunci: Filsafat Ilmu Islam, Kecerdasan Buatan, Kurikulum, Pendidikan Agama Islam, Maqasid Shariah.

A. Introduction

Generative Artificial Intelligence (AI) disruption and machine learning are reconfiguring the knowledge ecosystem from scientific discovery and text production to

decision-making.¹ In education, cutting-edge evidence suggests AI is able to improve efficiency, provide instant feedback, and facilitate adaptive learning, even though it is overshadowed by ethical problems, bias, and dependency.^{2;3} In the domain of Islamic Religious Education (PAI), the opportunities include: Qur'an-based recitation tutors based on voice recognition, memorization analytics, digital hadith/fiqh tracking, and tracking spiritual-ethical development through behavioral indicators. At the same time, there are key questions of philosophy of science: 1) Whether machine intelligence can be categorized as a subject of learning/reasoning; 2) Whether the AI output can have a valid *'ilm status*; How to verify religious references and sanad authorities; and 3) Whether the goals of Islamic education (*tazkiyatun nafs, morals*) are in line with algorithmic performance optimization.

The massive development of AI in the Industry 5.0 era has brought a major transformation in the world of education. AI is now able to perform functions that were previously synonymous with the role of teachers, such as providing instant feedback, conducting adaptive assessments, and managing learning content tailored to individual needs.⁴ On the one hand, this progress opens up great opportunities to increase the effectiveness and efficiency of the teaching and learning process, including in Islamic Religious Education. However, on the other hand, there are concerns that arise regarding how to ensure that AI outputs are aligned with epistemic truths, moral values, and the goals of Islamic education that emphasize the formation of noble morals.

This anxiety is even more relevant when considering AI characters that are *black boxes*, which produce outputs that are difficult to trace through the logical process.^{5;6} In PAI, the traceability of knowledge sources and authority is fundamental, so the lack of transparency of AI poses a potential risk of misinformation. This is important where PAI does not only transfer factual knowledge but also shapes the character and spirituality of students in accordance with the principles of *maqasid al-shariah*. Religious literature marks

¹ Sam Baron, "Trust, Explainability and AI," *Philosophy & Technology* 38, no. 1 (March 8, 2025): 4, doi:10.1007/s13347-024-00837-6.

² Soham Bandyopadhyay et al., "Novel Framework of Significant Risk Factor Identification and Cardiovascular Disease Prediction," *Expert Systems with Applications* 263 (March 2025): 125678, doi:10.1016/j.eswa.2024.125678.

³ Tahereh Saheb and Tayebah Saheb, "Topical Review of Artificial Intelligence National Policies: A Mixed Method Analysis," *Technology in Society* 74 (August 2023): 102316, doi:10.1016/j.techsoc.2023.102316.

⁴ Muhammad Haris Saeed et al., "Renewable Energy Resource Management Using an Integrated Robust Decision Making Model under Entropy and Similarity Measures of Fuzzy Hypersoft Set," *Heliyon* 10, no. 13 (July 2024): e33464, doi:10.1016/j.heliyon.2024.e33464.

⁵ Margarida Lucas et al., "Digital Proficiency: Sorting Real Gaps from Myths among Higher Education Students," *British Journal of Educational Technology* 53, no. 6 (November 11, 2022): 1885–1914, doi:10.1111/bjet.13220.

⁶ Margaret Bearman and Rola Ajjawi, "Learning to Work with the Black Box: Pedagogy for a World with Artificial Intelligence," *British Journal of Educational Technology* 54, no. 5 (September 22, 2023): 1160–73, doi:10.1111/bjet.13337.

the need for a dignified technological theology, caution against dehumanization, while proactively guiding innovation.^{7;8}

AI in education (AIED) research has been widely conducted with a focus on technical aspects such as learning speed, method effectiveness, and user perception.^{9;10} In the realm of Islamic education, the study of technology ethics and AI is beginning to emerge, for example the idea of Islamic technological theology which emphasizes that AI should be positioned as a *human muin* (helper), not a substitute for the role of educators.¹¹ The majority of studies are still normative and have not systematically linked the principles of Islamic philosophy of ontology, epistemology, and axiology with the practice of using AI in the PAI class.

From the literature review above, it can be seen that there is a *significant research gap*. There is no conceptual model that combines contemporary AI literacy with the philosophical framework of Islamic science operationally for the context of religious learning.¹² This integration is important so that AI is not just a technical instrument, but also an educational instrument that maintains the authority of Islamic learning sources, values, and goals. This gap is the basis for this research to develop an integrative framework that can be adopted by teachers, curriculum designers, and PAI researchers.

Based on these conditions, this research offers in the form of a conceptual framework of PAI-AI Trinity of Science that combines three main aspects: Epistemic ability to verify and contextualize AI knowledge in the framework of sharia; ethics of applying principles *maqasid al-shariah* and manners in AI human interaction; and pedagogic use of AI to enrich PAI learning methods and media.

B. Research Methods

This research is a structured literature review (scoping review) followed by conceptual synthesis. Source searches were conducted on the basis of indexed journals (Scopus) and major publishers (Springer, Wiley, Elsevier, MDPI, ACM) for keywords: *AI in education, generative AI, AI literacy, explainable AI, Islamic education, Islamic ethics AI, philosophy of science*. The inclusion criteria are in the form of a reputable journal article (Scopus), with a

⁷ Marius Dorobantu, "ARTIFICIAL INTELLIGENCE AS A TESTING GROUND FOR KEY THEOLOGICAL QUESTIONS," *Zygon: Journal of Religion and Science* 57, no. 4 (December 2, 2022), doi:10.1111/zygo.12831.

⁸ Mohammed Gamal Abdelnour, "Artificial Intelligence and the Islamic Theology of Technology: From 'Means' to 'Meanings' and from 'Minds' to 'Hearts,'" *Religions* 16, no. 6 (June 18, 2025): 796, doi:10.3390/rel16060796.

⁹ Shan Wang et al., "Artificial Intelligence in Education: A Systematic Literature Review," *Expert Systems with Applications* 252 (October 2024): 124167, doi:10.1016/j.eswa.2024.124167.

¹⁰ Yusuke Kajiware and Kouhei Kawabata, "AI Literacy for Ethical Use of Chatbot: Will Students Accept AI Ethics?," *Computers and Education: Artificial Intelligence* 6 (June 2024): 100251, doi:10.1016/j.caeai.2024.100251.

¹¹ Mohammed Gamal Abdelnour, "Artificial Intelligence and the Islamic Theology of Technology: From 'Means' to 'Meanings' and from 'Minds' to 'Hearts,'" *Religions* 16, no. 6 (June 18, 2025): 796, doi:10.3390/rel16060796.

¹² Laura Kristen Allen and Panayiota Kendeou, "ED-AI Lit: An Interdisciplinary Framework for AI Literacy in Education," *Policy Insights from the Behavioral and Brain Sciences* 11, no. 1 (March 18, 2024): 3–10, doi:10.1177/23727322231220339.

DOI, in the range of 2020-2025, relevant to education/ethics/philosophy of science and/or the Islamic context. Sources are synthesized thematically on three axes, namely epistemic, ethical/axiological, and pedagogic. Conceptual validity is enforced through the triangulation of theory between AIED literature, AI literacy, explainable AI, and Islamic theology/ethics.

This study uses a structured literature review approach followed by conceptual synthesis to formulate the PAI-AI model of Trinitas Ilmu (PAI-AI). This approach was chosen because the integration of Artificial Intelligence (AI) in Islamic Religious Education (PAI) with the perspective of philosophy of science is still a new area of study, so it requires comprehensive literature mapping to identify *research gaps* as well as formulate conceptual novelties.

The *first* phase begins with a literature search on internationally reputable databases, including Scopus and major publishers such as Springer, Wiley, Elsevier, MDPI, and ACM. The keywords used include AI in education, generative AI, AI literacy, explainable AI, Islamic education, Islamic ethics AI, and philosophy of science. The *second stage* is the selection of sources based on the inclusion criteria of Scopus indexed journal articles that have an active DOI link and are published in the 2020–2025-time span that focuses on education, ethics/philosophy of science, or the Islamic context. The *third stage* is to conduct thematic synthesis, in which literature sources that meet the criteria are classified into three main axes of the PAI-AI Trinity of Sciences. The *fourth stage* is theoretical triangulation, which connects four theoretical frameworks: Artificial Intelligence in Education (AIED), AI Literacy, Explainable AI (xAI), and Islamic Theology & Ethics. This triangulation approach aims to ensure that the resulting conceptual model is not only technically robust, but also has philosophical and moral legitimacy that is in line with the mission of Islamic education.

C. Results and Discussion

Ontological Findings

The philosophical literature of technology and religion emphasizes the line between human moral agency and algorithmic performance: AI has no intention/spirit, so normative authority remains with humans & traditions. PAI implications: AI serves as *muin* epistemic (assistant), not a substitute *mu'allim/ murabbi*. The study of the philosophy of technology and religion emphatically draws the theoretical boundary between human moral agents and the algorithmic performance of AI. Dorobantu¹³ argues that while AI can demonstrate high performance in certain tasks, it has no intention of (*niyyah*), spiritual consciousness, or the spirit, cannot be categorized as a moral subject, and normative authority remains in the realm of man and scientific tradition. Meanwhile, Abdelnour¹⁴ Highlighting integral concepts *qalb* In Islamic doctrine the moral and cognitive center of humans cannot be replaced by

¹³ Dorobantu, "ARTIFICIAL INTELLIGENCE AS A TESTING GROUND FOR KEY THEOLOGICAL QUESTIONS."

¹⁴ Abdelnour, "Artificial Intelligence and the Islamic Theology of Technology: From 'Means' to 'Meanings' and from 'Minds' to 'Hearts,'" June 18, 2025.

machines, emphasizing that AI only serves as a means and not an end in the dissemination of Islamic knowledge.

This view parallels the modern philosophical argument that AI, in any form today, is not qualified to be an authentic moral agent. The weakness of AI lies in the inability of machines to have consciousness, free will, or moral reflection capacity is a fundamental requirement of moral agency according to the Western ethical tradition. Additional support comes from the Stanford Encyclopedia of Philosophy, which emphasizes that while AI can be programmed as explicit ethical agents, it lacks a true moral understanding or accountability capability.

Within the framework of Islamic Religious Education (PAI), these ontological findings confirm that AI should not be positioned as a substitute for teachers (*mu'allim*) or spiritual guide (*murabbi*). Instead, AI should act as an epistemic *muin* assistant in the learning process that enriches sources and methods without shifting the normative authority of teachers or sacred texts. This paradigm maintains the integrity of Islamic traditions while still using technological sophistication. It reflects epistemological prudence as well as pragmatic adaptation to the development of science and technology.

Epistemic Findings

Large models produce convincing answers but have the potential for hallucinations, data bias, and spurious correlations.^{15,16} In PAI, this requires human in the loop, verification of sanad/references, and bibliographic guardrails. The cutting-edge corpus emphasizes conceptual, evaluative, ethical, and contextual competencies.¹⁷ For PAI, this literacy must include *tahqiq* (verification), *tamyiz* (differences in authority), and intellectual manners. One of the main challenges in the use of AI in the realm of Islamic Religious Education (PAI) is the nature of the black box of many generative AI models. Although AI is capable of generating convincing and seemingly valid answers, there is a serious risk of hallucinations, data bias, and spurious correlations that can mislead users. In the context of PAI, this threatens textual authority and sanad that are valid references, thus requiring active human involvement (human in the loop), cross-verification of sanad, and the application of bibliographic guardrails to ensure that AI outputs remain within the scientific and sharia corridors.

AI literacy has evolved into a multidimensional concept. The ED-AI Lit framework developed by Allen dan Kendeou¹⁸ It covers six main dimensions: Knowledge, Evaluation, Collaboration, Contextualization, Autonomy, and Ethics. This marks an expanded emphasis not only on technical aspects, but on critical evaluation, ethics, and contextualization of AI. For the realm of PAI, AI literacy needs to be further expanded to include elements typical of Islamic intellectuals such as *tahqiq* (Source verification), *tamyiz* (Differences in authority),

¹⁵ Lucas et al., "Digital Proficiency: Sorting Real Gaps from Myths among Higher Education Students."

¹⁶ Bearman and Ajjawi, "Learning to Work with the Black Box: Pedagogy for a World with Artificial Intelligence."

¹⁷ Allen and Kendeou, "ED-AI Lit: An Interdisciplinary Framework for AI Literacy in Education."

¹⁸ Ibid.

and intellectual manners as an epistemic prerequisite for AI not only to be used as a tool, but as a source of responsible teaching based on scientific manners. In summary, the epistemic findings from the literature review show two critical needs for the implementation of AI in PAI: first, overcoming the limitations of black boxes through verification mechanisms and the role of teachers as content controllers; second, to form AI literacy that is rich in combined value between modern AI competencies and Islamic epistemological principles so that AI does not marginalize traditional authority in the formation of religious knowledge.

The integration of AI in Islamic Religious Education (PAI) cannot be separated from ethical discourse, both in the perspective of modern science philosophy and Islamic theology. The cutting-edge literature highlights that AI adoption should consider value alignment, transparency, and accountability, especially when AI affects moral and religious perceptions.¹⁹ In the context of PAI, this means that the use of AI must be in harmony with maqasid al shariah to protect religion, intellect, soul, descent, and property and avoid biased automation that can replace the role of teachers as moral guides.²⁰ This ethical framework requires the development of ethical guardrails based on Islamic principles, such as the concepts of trustworthiness and justice, to ensure that AI is not only legally valid, but also moral in its application. This principle fills a research gap that has been focusing on AI ethics in general without linking it to the context of revelation-based religious education.²¹

Axiological & Pedagogical Findings

From a pedagogical perspective, the literature on AI in education shows that the use of this technology can enrich learning through personalization, adaptive learning, and automated feedback.²² However, in PAI, the biggest challenge is maintaining the authenticity of the teaching sources while leveraging AI to increase participation and motivation to learn. Recent research in AI in Religious Education indicates that hybrid learning models combine AI for conceptual materials and human educators for spiritual deepening more effectively than fully automated learning.²³ This model allows AI to perform technical roles such as content curation and language assistance, while teachers remain the *murabbi* which guides the character and manners of students.

¹⁹ Anna Jobin, Marcello Ienca, and Effy Vayena, "The Global Landscape of AI Ethics Guidelines," *Nature Machine Intelligence* 1, no. 9 (September 2, 2019): 389–99, doi:10.1038/s42256-019-0088-2.

²⁰ Mawloud Mohadi and Yasser Tarshany, "Maqasid Al-Shari'ah and the Ethics of Artificial Intelligence," *Journal of Contemporary Maqasid Studies* 2, no. 2 (July 15, 2023): 79–102, doi:10.52100/jcms.v2i2.107.

²¹ Ezieddin Elmahjub, "Artificial Intelligence (AI) in Islamic Ethics: Towards Pluralist Ethical Benchmarking for AI," *Philosophy & Technology* 36, no. 4 (December 1, 2023): 73, doi:10.1007/s13347-023-00668-x.

²² Olaf Zawacki-Richter et al., "New Advances in Artificial Intelligence Applications in Higher Education?," *International Journal of Educational Technology in Higher Education* 21, no. 1 (May 2, 2024): 32, doi:10.1186/s41239-024-00464-3.

²³ Azie Ony Sapura and Hasan Basri, "Implementasi Penggunaan Artificial Intelligence Pada Pembelajaran Al-Islam Di Digital Technology Class Program SMP Muhammadiyah 12 GKB Gresik," *TARLIM: JURNAL PENDIDIKAN AGAMA ISLAM* 7, no. 2 (September 30, 2024): 179–88, doi:10.32528/tarlim.v7i2.2441.

Recent studies show that AI has significant potential to revolutionize learning through personalization, rapid feedback, adaptive formative assessments, and Arabic language training and script search. Meta-analysis by Wang dan Fan²⁴ confirms that generative technologies such as Chat GPT in general improve learning performance, learning perception, and higher order thinking skills with great positive effects. In the context of PAI, this allows teachers and learners to access the content of the Qur'an, hadiths, commentaries, and classics in an interactive and responsive manner, encouraging more adaptive and contextual learning. Personalization of benefits where quick feedback, adaptive formative assessments, Arabic language training, and tracing.²⁵

The need for explainable AI (xAI), which is AI that provides reasons and logical traces for each output, is crucial in building trust, learner reflection, and pedagogical accountability. A report from the European Digital Education Hub emphasizes the importance of xAI that facilitates human oversight and shared responsibility in the learning ecosystem, in addition to, Geethanjali²⁶ presents an integrative xAI framework that enhances transparency, clarity, and trust in AI-based learning systems. xAI & accountability: meaningful explanations for teachers/students increase the urgency to build trust and reflective learning.

Philosophy of Science Perspectives for PAI

Ontologically, AI is positioned as an artifact, or instrumental intelligence rather than a moral subject. AI has no intention, consciousness, or spirit; so that normative authority remains in humans and traditions, especially PAI scholars and teachers^{27,28} emphasizes that AI cannot replace the role of *mu'allim* or *murabbi*; rather, it functions as an epistemic *mu'in* assistant in the learning process, but not a substitute for a spiritual caregiver.

The Islamic epistemological tradition where authentic knowledge is built on three main foundations: (a) the authority of sources such as the Qur'an and Sunnah, (b) methodologies such as *ijtihad* and *qiyas*, and (c) intellectual manners that bind science. AI has the potential to strengthen the *istikra'* (corpus search) aspect, making it easier to search for large amounts of Islamic texts, but it cannot replace the *istinbath* process, which is the normative withdrawal of laws or meanings based on tradition and reason. Therefore, the application of AI in PAI must be complemented by a mechanism of source curation, citation-

²⁴ Jin Wang and Wenxiang Fan, "The Effect of ChatGPT on Students' Learning Performance, Learning Perception, and Higher-Order Thinking: Insights from a Meta-Analysis," *Humanities and Social Sciences Communications* 12, no. 1 (May 6, 2025): 621, doi:10.1057/s41599-025-04787-y.

²⁵ Moh. Mauluddin, "Kontribusi Artificial Intelligence (AI) Pada Studi Al Quran Di Era Digital; Peluang Dan Tantangan," *Madinah: Jurnal Studi Islam* 11, no. 1 (June 10, 2024): 99–113, doi:10.58518/madinah.v11i1.2518.

²⁶ K Sai Geethanjali and Nidhi Umashankar, "Enhancing Educational Outcomes with Explainable AI: Bridging Transparency and Trust in Learning Systems," in *2025 International Conference on Emerging Systems and Intelligent Computing (ESIC)* (IEEE, 2025), 325–28, doi:10.1109/ESIC64052.2025.10962568.

²⁷ Abdelnour, "Artificial Intelligence and the Islamic Theology of Technology: From 'Means' to 'Meanings' and from 'Minds' to 'Hearts,'" June 18, 2025.

²⁸ Dorobantu, "ARTIFICIAL INTELLIGENCE AS A TESTING GROUND FOR KEY THEOLOGICAL QUESTIONS."

checking, and a digital chain of custody to maintain the epistemic validity of the things reminded by Lucas and Bearmen^{29;30} on the challenges of AI *black-box* in education, and by Allen & Kendeou³¹ in AI literacy needs that include evaluative and contextual competencies.

The context of axiology, the purpose of Islamic Religious Education, namely *tazkiyah*, the formation of noble morals (*karimah* morality), and the achievement of *hikmah* must be a compass in the governance and use of AI. AI must be oriented to support human flourishing, not just technocratic optimization. Baron³² emphasizing the importance of the orientation of *maqasid al-shariah*, namely maintaining religion, soul, intellect, descent, and property in the design and implementation of educational AI to be in line with the provisions of sharia and Islamic pedagogical goals.

The three dimensions of Ontology, Epistemology, and Axiology collaborate in the PAI-AI model of the Trinity of Sciences, as follows; Ontology keeps AI as a tool, while moral judgment and normative decisions remain with educators/scholars. Epistemology ensures AI is used responsibly by verifying references and maintaining the validity of knowledge. Axiology ensures AI is used for noble educational purposes, in accordance with the formulation of *maqasid* and Islamic ethics.

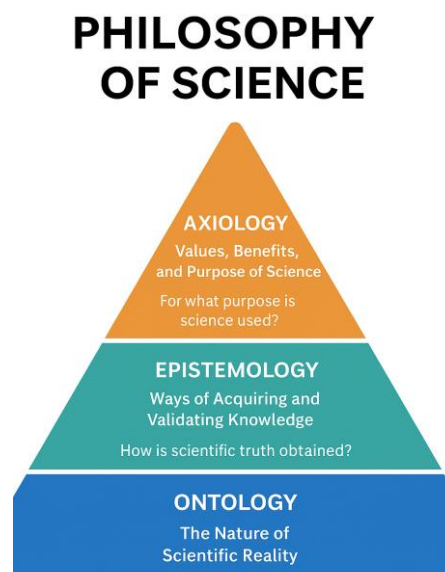


Figure 1. The Triangle of Philosophy of Science

The unity of the message from various experts is: AI must be seen as an instrument (*means*) not an end (*telos*) in Islamic Religious Education. AI needs to be guided by the values of *tauhid*, *maslahah*, *wisdom*, and social justice. The lack of representation of Islamic values in the global AI ethical framework remains a serious problem. Therefore, the development of *pluralist ethical benchmarking* is crucial so that AI is normatively consistent with local religious and cultural values. Frameworks such as trusteeship (*i'timani*) and digital

²⁹ Lucas et al., "Digital Proficiency: Sorting Real Gaps from Myths among Higher Education Students."

³⁰ Bearman and Ajjawi, "Learning to Work with the Black Box: Pedagogy for a World with Artificial Intelligence."

³¹ Allen and Kendeou, "ED-AI Lit: An Interdisciplinary Framework for AI Literacy in Education."

³² Baron, "Trust, Explainability and AI."

waqf operationally direct AI design to fulfill moral and social responsibilities. This paves the way for educational AI models that are not only effective, but also ethical and inclusive.

We propose a three-axis conceptual framework as a guide for the development of AI-based Islamic Religious Education (PAI) curriculum, teaching tools, and research, namely Epistemic, Ethical, and Pedagogic. First, the main focus of the epistemic axis is to build AI literacy that is able to verify Islamic sources, fact-check references, and maintain a digital chain of custody in all teaching materials. With AI characters prone to bias and hallucinations, the need for a system that can track information is very important.³³ AI in PAI should not only access sacred texts, but also link references to authoritative scholars or classical books as epistemic validation.³⁴ This approach combines technology with Islamic scientific manners in harmony.

The two axes of ethics emphasize the development of an AI ethics for PAI module that covers privacy issues, algorithmic bias, and accountability, based on the framework of *maqasid al shariah*. The application of AI in education is not value-free but must be directed to the purpose of *sharia*: to protect religion, soul, intellect, descent, and property.³⁵; ³⁶ This ensures that AI-based education systems support human flourishing and community well-being, not just technological efficiency.³⁷ The three pedagogic axes are directed at AI-assisted learning designs such as speech recognition-based Qur'an tutors or scientific writing assistants with citation traces that apply the principles of xAI (explainable AI) and human in the loop.³⁸ The role of teachers remains crucial as moral and spiritual guides.³⁹ AI is only a technical assistant to enrich adaptive learning, not a substitute for educators.

This framework is not only a technical solution, but also a manifestation of Islamic principles in the digital age: maintaining the faith, protecting human dignity, and ensuring that technological progress is in line with *maqasid al shariah*. This approach can be an international model for the integration of AI in religious education that is just, transparent, and based on the values of monotheism.⁴⁰

³³ Allen and Kendeou, "ED-AI Lit: An Interdisciplinary Framework for AI Literacy in Education."

³⁴ Sodikin Sodikin, "Transformasi Pendidikan Agama Islam Melalui Artificial Intelligent (AI): Upaya Meningkatkan Kemampuan Berpikir Kritis Mahasiswa," *Academicus: Journal of Teaching and Learning* 3, no. 2 (September 5, 2024): 78–89, doi:10.59373/academicus.v3i2.65.

³⁵ Iit Supriatin et al., "Formulasi Etika Kecerdasan Buatan (AI) Dalam Pendidikan Islam: Pendekatan Maqāṣid al-Sharī'ah Dan Tafsir Tematik Al-Qur'an," *Halaqa: Journal of Islamic Education* 1, no. 2 (August 1, 2025): 121–40, doi:10.61630/hjie.v1i2.28.

³⁶ Ramlan Ramlan et al., "Character Values of Elementary School Education from the Perspective of Local Wisdom of Sundanese Culture," *Journal of Educational and Social Research* 13, no. 3 (May 5, 2023): 119, doi:10.36941/jesr-2023-0062.

³⁷ Baron, "Trust, Explainability and AI."

³⁸ M. Sukron Djazilan, Afib Rulyansah, and Jauharotur Rihlah, "Why AI Is Essential for the Future of Islamic Education: A Call for Ethical and Effective Implementation," *EDUKASIA: Jurnal Pendidikan Dan Pembelajaran* 5, no. 2 (December 29, 2024): 201–16, doi:10.62775/edukasia.v5i2.1373.

³⁹ Sodikin, "Transformasi Pendidikan Agama Islam Melalui Artificial Intelligent (AI): Upaya Meningkatkan Kemampuan Berpikir Kritis Mahasiswa."

⁴⁰ Amana Raquib et al., "Islamic Virtue-Based Ethics for Artificial Intelligence," *Discover Artificial Intelligence* 2, no. 1 (June 20, 2022): 11, doi:10.1007/s44163-022-00028-2.

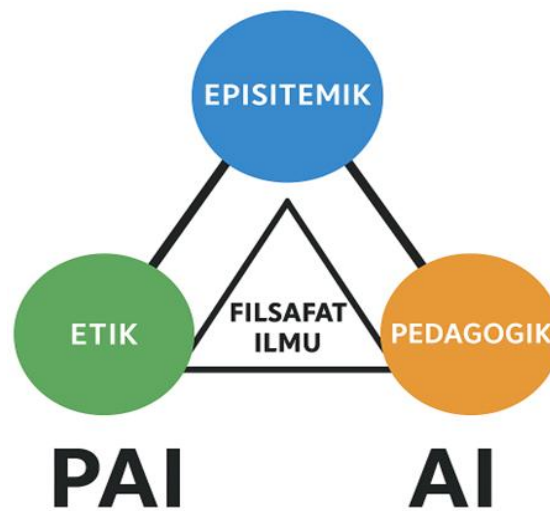


Figure 2. The PAI-AI Trinity Trilogy

Explanation of the PAI–AI Model of the Trinity of Knowledge

The PAI-AI model of Trinitas Ilmu is designed to integrate artificial intelligence technology into Islamic Religious Education while still being based on the framework of Islamic philosophy of science. The model is in the form of three main interconnected pillars:

Epistemic; Focus on the validity of AI-generated knowledge, the validity of the source, and the traceability of references; In the context of PAI, AI must be used with the mechanism of sanad verification, fact checking of primary sources (Qur'an, Hadith), and human in the loop to avoid bias or hallucination; Literature support Lucas⁴¹ emphasizing the need for education to prepare users for the *black box* nature of AI. Allen & Kendeou⁴² outlines an AI literacy framework that includes conceptual and evaluative competencies.

Ethics; Related to the application of Islamic values and principles in the use of AI, such as justice, privacy, trust, and the public good (*maqasid al shariah*); AI in PAI must be directed at strengthening morals, not just technical efficiency; Literature support: Abdelnour⁴³ outlines Islamic technological theology that places AI as a *human mu'in* (assistant), not a substitute for teachers or scholars. Dorobantu⁴⁴ emphasizing human dignity and religious freedom in the context of AI.

Pedagogic; Focusing on the use of AI to enrich PAI learning strategies: personalization, Qur'an-based tutoring based on voice recognition, analysis of memorization development, and interactive simulations of fiqh/akhlak learning; The pedagogic approach must combine AI with human-centered learning principles so that students do not lose

⁴¹ Lucas et al., "Digital Proficiency: Sorting Real Gaps from Myths among Higher Education Students."

⁴² Allen and Kendeou, "ED-AI Lit: An Interdisciplinary Framework for AI Literacy in Education."

⁴³ Abdelnour, "Artificial Intelligence and the Islamic Theology of Technology: From 'Means' to 'Meanings' and from 'Minds' to 'Hearts,'" June 18, 2025.

⁴⁴ Dorobantu, "ARTIFICIAL INTELLIGENCE AS A TESTING GROUND FOR KEY THEOLOGICAL QUESTIONS."

interaction and value guidance from teachers; Literature support: Saeed⁴⁵ explain the potential of AI in increasing the effectiveness of learning as well as its ethical risks. Hwang⁴⁶ emphasizing the role of AI in adaptive assessment and real-time feedback.

Table 1. The PAI-AI Trinity Trilogy

Theme	Key Focus	Achievement Indicators	Implementation Examples
Epistemik	Validity of knowledge, source description	• AI is able to present PAI material with authentic references (Qur'an, Hadith) • A fact checking mechanism is available by teachers • The existence of a human in the loop in the learning process	NLP-based AI that cites the official interpretation of the Ministry of Religion or authoritative interpretation books
Ethics	Islamic values and principles (<i>maqasad al syariah</i>)	• AI is used for the public good • Do not produce content that violates morals - Complies with privacy & copyright	AI for simulation of muamalah that complies with Islamic law
Pedagogy	Learning strategies and methods	• AI helps personalize learning • AI is used for adaptive assessment • AI enriches interactive learning media	Fiqh learning chatbot, Qur'an memorization application with speech recognition

Views of Religious Education and Islamic Ethics Figures / Experts on AI

Contemporary literature highlights the need for *ethically aligned* AI that is accountable, transparent, and equitable; and the need for pluralist ethical benchmarking that incorporates Islamic perspectives, not just Western ethics.^{47,48} The main message is uniform: AI is a tool, not a *telos* in that it needs to be guided by the values of monotheism, welfare, and social justice. A number of Muslim experts emphasize the importance of developing *ethically aligned* AI that is accountable, transparent, and equitable—and promotes a pluralist ethical benchmarking model—the inclusion of Islamic perspectives in AI ethical values and frameworks, rather than just copies of Western ethics.

⁴⁵ Saeed et al., “Renewable Energy Resource Management Using an Integrated Robust Decision Making Model under Entropy and Similarity Measures of Fuzzy Hypersoft Set.”

⁴⁶ Gwo-Jen Hwang et al., “Vision, Challenges, Roles and Research Issues of Artificial Intelligence in Education,” *Computers and Education: Artificial Intelligence* 1 (2020): 100001, doi:10.1016/j.caeai.2020.100001.

⁴⁷ Abdelnour, “Artificial Intelligence and the Islamic Theology of Technology: From ‘Means’ to ‘Meanings’ and from ‘Minds’ to ‘Hearts,’” June 18, 2025.

⁴⁸ Raquib et al., “Islamic Virtue-Based Ethics for Artificial Intelligence.”

Elmahjub⁴⁹ proposes a pluralistic approach in AI ethics, which incorporates the principles of *maslahah* (benefit) and Islamic ethical sources into the benchmarking of global values. This is important because AI ethics today is still heavily dominated by Western frameworks, which may not be in line with certain Islamic values. Raquib criticized the dominance of secular values in the regulation of AI technology, which they called part of the moral crisis in the Islamic world. They emphasized the need for AI that is designed with *the principle of do no harm* and aligned with *falah* (spiritual success), not just profit or efficiency. Qadir rhetorically questioned: Is a device that offers only adverse options useful to humans? Studies from Kannike dan Zuhri^{50;51} emphasizing the importance of Islamic principles such as Tawhid (oneness of God), *Maqasid al Shariah*, *Ihsan* (moral excellence), and *'Adl* (justice) in guiding the governance and implementation of AI. They say that AI should be designed with algorithmic accountability that is aligned with Islamic moral and social goals. Likewise, the *maṣlaḥah*-based approach is strengthened by Supriatin⁵², which integrates *maqasid* with thematic interpretation of the Qur'an as the ethical foundation of AI in the context of Islamic education underscores values such as *hifz al-din al-din al-aql*, and *amanah* as a moral pillar in the development of technology. An innovative model also comes from the Islamic digital framework of *waqf* (endowment), which highlights that data as religious assets must be managed with the principles of public trust and *maṣlaḥah*. This concept introduces an ethical approach to data ownership and utilization in AI based on Islamic values

D. Conclusion

AI offers great opportunities for PAI, but it is only worth it if it submits to the compass of Islamic philosophy of epistemic truth, human dignity, and welfare. The Trinity of Sciences PAI-AI framework provides a conceptual basis for designing curriculum, policy, and research that balances pedagogic benefits with ethical responsibilities, which integrate three key dimensions. First, epistemic, which is the ability to verify, validate, and contextualize AI-generated knowledge in the sharia corridor, including tracking scientific sanad and source validity. Second, ethics, namely the application of the principles of *maqasid al-shariah* and Islamic manners in AI human interaction, which includes the protection of human benefits, justice, and honor. Third, axiology, namely the orientation of the use of AI for moral, useful, and sustainable educational purposes according to the vision of Islamic education. Advanced studies need to test this framework empirically (curriculum designs, AI literacy impact tests, and moral/character metrics). Although educational AI literacy and

⁴⁹ Elmahjub, "Artificial Intelligence (AI) in Islamic Ethics: Towards Pluralist Ethical Benchmarking for AI."

⁵⁰ Uthman Mohammed Mustapha Kannike and AbdulGafar Olawale Fahm, "Exploring The Ethical Governance of Artificial Intelligence from An Islamic Ethical Perspective," *Jurnal Fiqh* 22, no. 1 (June 30, 2025): 134–61, doi:10.22452/fiqh.vol22no1.5.

⁵¹ M. Tajudin Zuhri, Lalan Sahlani, and Nenden Munawaroh, "The Ethics of Artificial Intelligence (AI) Utilization in Qur'anic Studies: An Islamic Philosophical Perspective," *Asyiahid Journal of Islamic and Quranic Studies (AJIQS)* 6, no. 2 (December 15, 2024), doi:10.62213/b6hexr21.

⁵² Supriatin et al., "Formulasi Etika Kecerdasan Buatan (AI) Dalam Pendidikan Islam: Pendekatan Maqāṣid al-Sharī'Ah Dan Tafsir Tematik Al-Qur'An."

Islamic ethical discourse are developing, there is no operational conceptual model that integrates Islamic ontology - epistemology - axiology as well as a modern AI literacy framework for PAI (binding sharia reference verification, pedagogically meaningful xAI, and maqasid-based ethical benchmarks). The PAI-AI Trinity of Sciences framework that we offer brings together the tradition of Islamic philosophy with AI literacy & xAI education, and translates it into curriculum competency design (knowledge-skills-attitudes), tool governance, and evaluative research agenda.

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