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Transforming Islamic Education in the AI Era: An AI Integration Model for PAI Teacher Pedagogical Competence

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Abstract:
Artificial intelligence (AI), particularly generative AI, is reshaping teaching, curriculum development, assessment, and teacher professional learning. For Islamic Religious Education (PAI), the transformation is not merely technological because AI-mediated learning must remain consistent with religious values, human agency, ethical responsibility, and the pedagogical purposes of Islamic education. This article aims to formulate a conceptual AI integration model for strengthening the pedagogical competence of PAI teachers. The study employed a qualitative conceptual literature review with thematic analysis of recent scholarly publications, international policy documents, and established frameworks on AI in education, teacher competence, AI literacy, and Islamic education. The synthesis indicates that effective integration requires five mutually reinforcing dimensions: human-centred Islamic orientation, AI literacy and critical evaluation, AI-TPACK pedagogical design, ethical and responsible assessment, and continuous professional learning. These dimensions are organized into three developmental levels—acquire, deepen, and create—and connected through a cycle of contextual diagnosis, pedagogical design, implementation, reflection, and improvement. The proposed model positions AI as a pedagogical partner rather than a replacement for the teacher. Its main contribution is the contextualization of global AI teacher competencies within PAI, emphasizing adab, amanah, truthfulness, intellectual responsibility, maqasid-oriented judgment, and preservation of teacher–student relationships. The model provides a conceptual foundation for teacher training, curriculum development, and empirical validation in Islamic education settings.

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Introduction (مقدمة)

Artificial intelligence (AI) has moved rapidly from a specialized computational technology into an everyday infrastructure for producing, organizing, and evaluating knowledge. In education, generative AI (GenAI) applications can draft lesson plans, explain concepts, generate learning materials, create questions, summarize sources, provide feedback, and support administrative work. This development changes the pedagogical environment in which teachers operate. The relevant question is therefore no longer whether teachers will encounter AI, but how they can use it without surrendering professional judgment, human agency, or educational responsibility. UNESCO's AI Competency Framework for Teachers identifies five broad dimensions—human-centred mindset, ethics of AI, AI foundations and applications, AI pedagogy, and AI for professional learning—with progression from acquire to deepen and create (Miao & Cukurova, 2024).

For Islamic Religious Education (Pendidikan Agama Islam/PAI), the challenge is more complex. PAI teachers are expected not only to transmit knowledge but also to cultivate faith, akhlak, responsible conduct, critical reasoning, and social sensitivity. The use of AI consequently cannot be assessed solely by efficiency or novelty. A pedagogically appropriate use must consider the truthfulness of generated content, the authority and interpretation of religious sources, privacy, intellectual property, academic integrity, bias, and the formation of students' moral agency. UNESCO's guidance on generative AI similarly stresses human-centred use, protection of teacher rights, responsible policy, and development of human capacity (Miao & Holmes, 2023).

Previous scholarship has established important foundations. The Technological Pedagogical Content Knowledge (TPACK) framework explains that effective technology integration depends on the interaction of technological, pedagogical, and content knowledge rather than on technical skills alone (Mishra & Koehler, 2006; Koehler et al., 2013). Research on AI in education has mapped applications in assessment, adaptive learning, profiling, tutoring, and management (Zawacki-Richter et al., 2019). More recent studies on GenAI identify opportunities for teacher productivity and personalized learning, while also documenting risks related to hallucination, bias, privacy, assessment validity, and overreliance (Kasneci et al., 2023; Lo, 2023; Tlili et al., 2023). Studies of teacher practice also indicate that educators often use GenAI first for preparation, assessment, and administrative tasks rather than for direct classroom interaction, reflecting both practical benefits and pedagogical uncertainty (Kohnke et al., 2023; Integrating generative artificial intelligence in K-12 education, 2025).

The limitation in the existing literature is that global AI competency frameworks tend to be domain-general, whereas research on Islamic education often discusses digital transformation without translating AI competencies into a coherent teacher-pedagogy model. In particular, the relationship between AI literacy, PAI content integrity, Islamic ethical principles, pedagogical design, and assessment has not been sufficiently synthesized into a developmental model for PAI teachers. This gap is important because a teacher may be technically proficient in prompting an AI system while remaining unable to judge whether the generated religious explanation is valid, contextually appropriate, or educationally desirable.

This article therefore proposes a conceptual model that contextualizes AI teacher competency for PAI. The novelty lies in integrating UNESCO's human-centred AI competency orientation with TPACK and Islamic educational values, then translating the synthesis into five competency dimensions and three developmental levels. The study aims to answer two questions: (1) What competencies should PAI teachers develop to integrate AI pedagogically, ethically, and substantively? and (2) How can those competencies be organized into a practical

developmental model for teacher professional learning?.

Method (منهج)

This study used a qualitative conceptual literature review. The approach was selected because the purpose was to synthesize existing theoretical and empirical knowledge and formulate a conceptual model rather than measure the effectiveness of an intervention in a particular school. Conceptual reviews are appropriate when a field is rapidly changing and requires integration across previously separated concepts. The review focused on literature published primarily during the last ten years, with earlier seminal works retained when they provided foundational constructs such as TPACK.

Identify Subsections

Sources were selected purposively from four categories: (1) international peer-reviewed research on AI, GenAI, teacher competence, and educational technology; (2) established theoretical frameworks on technology integration and AI literacy; (3) policy and competency frameworks produced by UNESCO and other international bodies; and (4) literature relevant to ethics, human agency, and the educational implications of AI. Particular attention was given to UNESCO's AI Competency Framework for Teachers (Miao & Cukurova, 2024), UNESCO's Guidance for Generative AI in Education and Research (Miao & Holmes, 2023), the TPACK framework (Mishra & Koehler, 2006), and empirical studies examining teacher preparedness and GenAI use (e.g., Kasneci et al., 2023; Kohnke et al., 2023; Shi, 2025).

Research Design

Data analysis followed three stages. First, relevant concepts were extracted and grouped into technological, pedagogical, ethical, content, and professional-learning categories. Second, thematic comparison was conducted to identify convergences, gaps, and concepts that require contextualization for PAI. Third, the synthesized themes were mapped into a developmental model. The model was designed around a progression from foundational awareness to guided pedagogical integration and finally to critical and creative transformation. To strengthen conceptual coherence, each proposed competency was checked against the principle that AI should augment rather than replace teacher agency and against the distinctive aims of Islamic education.

Result (نتائج)

The synthesis produced five dimensions of PAI teacher AI competence. They are not independent technical skills; rather, they form an integrated competency system in which ethical judgment and Islamic educational purposes regulate the selection and pedagogical use of AI.

No	Competency dimension	Core capability	Expected evidence
1	Human-centred Islamic orientation	Position AI as an assistive technology while preserving teacher agency, adab, amanah, and student dignity.	AI-use principles; lesson rationale; reflection record.
2	AI literacy and critical evaluation	Understand basic AI/GenAI functions, prompting, limitations, hallucination, bias, privacy, and source verification.	Verified AI outputs; source-checking protocol; prompt log.

3	AI-TPACK pedagogical design	Align AI tools with PAI content, learning outcomes, pedagogy, learner characteristics, and context.	AI-integrated lesson plan; learning activity; differentiated resources.
4	Ethical assessment and academic integrity	Design assessment that values reasoning, authentic performance, attribution, and responsible AI use.	Assessment rubric; AI disclosure rule; oral/performance tasks.
5	Professional learning and innovation	Use AI for reflective practice, collaboration, action research, and continuous improvement.	Professional portfolio; peer review; action-research cycle.

Table 1. Proposed dimensions of AI-integrated pedagogical competence for PAI teachers

DEVELOPMENTAL LEVELS OF COMPETENCE

The five dimensions can be developed through three progressive levels adapted from UNESCO's acquire–deepen–create logic. The levels describe increasing quality of professional judgment rather than a simple sequence of software skills.

Dimension	Acquire	Deepen	Create
Human-centred Islamic orientation	Recognize benefits, risks, and the principle that teachers remain accountable.	Apply Islamic ethical criteria when selecting and supervising AI use.	Develop contextual AI-use principles and contribute to institutional policy.
AI literacy and critical evaluation	Understand basic AI functions and common errors.	Verify outputs against authoritative sources and multiple references.	Develop prompts, verification workflows, and domain-specific AI resources.
AI-TPACK pedagogical design	Use AI for limited preparation tasks.	Integrate AI into learning activities aligned with PAI outcomes.	Redesign PAI learning environments where AI supports inquiry, dialogue, and higher-order thinking.
Ethical assessment	Identify academic-integrity risks.	Design transparent rules and authentic assessment.	Develop assessment systems resilient to AI misuse while promoting responsible AI literacy.
Professional learning	Use AI for individual learning and reflection.	Collaborate with peers and evaluate practice.	Lead innovation, mentoring, action research, and institutional improvement.

Table 2. Three-level progression of PAI teacher AI competence

THE PROPOSED AI-PAI INTEGRATION MODEL

The proposed model consists of five dimensions embedded in a continuous pedagogical cycle: Diagnose, Design, Implement, Verify, Reflect, and Improve. The cycle is deliberately non-linear. A teacher may return to an earlier stage whenever an AI output is uncertain, a learning objective changes, or ethical concerns emerge.

Stage	Key question	Teacher action	Output
Diagnose	What learning problem should be solved?	Identify learner needs, PAI outcomes, contextual constraints, and whether AI is actually necessary.	Problem statement and AI-use decision.
Design	How can AI support—not replace—the pedagogy?	Select tool, construct prompts, plan teacher mediation, source verification, and student activity.	AI-integrated lesson/activity plan.

Implement	How is AI used responsibly in practice?	Facilitate inquiry, dialogue, collaboration, and critical use while maintaining teacher oversight.	Learning experience and student products.
Verify	Is the AI-supported result accurate and educationally sound?	Check religious sources, factual accuracy, bias, privacy, and alignment with learning outcomes.	Validated content and feedback.
Reflect	What changed in learning and teacher practice?	Analyze student work, participation, misconceptions, and ethical issues.	Reflection and evidence.
Improve	What should be redesigned?	Revise prompts, pedagogy, assessment, policy, and professional learning needs.	Improved practice and professional portfolio.

Table 3. AI-PAI pedagogical integration cycle

Discussion (مناقشة)

The first implication of the model is that AI competence in Islamic Religious Education (PAI) should be understood primarily as a form of pedagogical judgment rather than merely as technical mastery of digital tools. The ability to operate a chatbot, generate instructional materials, or formulate prompts does not automatically indicate professional competence. In PAI, teachers are responsible not only for facilitating learning but also for ensuring that religious knowledge presented to students is accurate, contextually appropriate, and consistent with authoritative Islamic sources. Therefore, AI competence requires teachers to critically evaluate AI-generated information, identify potential inaccuracies or biases, and determine whether particular outputs are pedagogically and religiously appropriate. This perspective shifts the emphasis from *what teachers can do with AI* to *how wisely and responsibly teachers decide when and why AI should be used* in the learning process (Mishra & Koehler, 2006; Miao & Cukurova, 2024).

From the perspective of the Technological Pedagogical Content Knowledge (TPACK) framework, effective technology integration cannot be separated from pedagogical knowledge and subject-matter knowledge. In PAI, this means that technological proficiency must operate within an understanding of Islamic content, learning objectives, instructional strategies, and students' developmental characteristics. A teacher who is highly proficient in using generative AI but lacks sufficient understanding of Islamic concepts may inadvertently reproduce inaccurate interpretations, weak religious arguments, or decontextualized explanations. Conversely, teachers with strong pedagogical and religious knowledge can use AI selectively as a supporting instrument while retaining professional control over learning objectives, content selection, instructional processes, and assessment. Thus, AI competence in PAI represents an integrated capacity in which technological knowledge complements rather than replaces pedagogical and religious expertise (Mishra & Koehler, 2006).

This implication becomes particularly important because generative AI can produce information that appears convincing while not necessarily being epistemically reliable. In Islamic education, the problem is more complex because religious claims may require verification against the Qur'an, Hadith, classical and contemporary scholarly interpretations, and established principles of Islamic jurisprudence. Consequently, AI literacy for PAI teachers should include source verification, critical evaluation, contextual interpretation, and awareness of the limitations of algorithmically generated content. Teachers need to develop the ability to distinguish between AI as a tool for generating ideas and AI as an authoritative source of religious knowledge. Such a distinction reinforces the principle that human judgment remains central to educational

decision-making, particularly when AI-generated content has implications for students' religious understanding, values, and character development (Miao & Cukurova, 2024; UNESCO, 2021).

Finally, conceptualizing AI competence as pedagogical judgment provides a more sustainable basis for teacher professional development. AI technologies are evolving rapidly, meaning that specific platforms, interfaces, and technical skills acquired today may become obsolete in the future. However, the underlying competencies of critical thinking, pedagogical reasoning, religious source evaluation, ethical decision-making, and human-centered educational practice remain relevant across technological changes. Therefore, professional development for PAI teachers should not focus exclusively on training them to operate particular AI applications but should strengthen their capacity to integrate AI responsibly within educational purposes and Islamic values. In this sense, the competent PAI teacher is not the teacher who uses the most advanced AI tools, but the teacher who can make informed decisions about when AI adds educational value, when its outputs require verification, and when human expertise must take precedence. Such an approach places AI within a framework of professional responsibility, human agency, and ethical Islamic education (Mishra & Koehler, 2006; Miao & Cukurova, 2024).

The second implication concerns the content dimension of Islamic Religious Education (PAI), particularly the question of how religious knowledge should be evaluated and validated in an AI-mediated learning environment. Generative AI is capable of producing fluent, coherent, and persuasive language; however, linguistic fluency should not be equated with epistemic validity. AI-generated responses may contain inaccurate quotations, incomplete interpretations, fabricated references, or theological claims that are detached from their original historical and intellectual contexts. This challenge is particularly significant in PAI because religious knowledge is not merely informational but also functions as a foundation for students' beliefs, values, attitudes, and practices. Consequently, teachers need to recognize that the apparent sophistication of AI-generated content does not guarantee its accuracy or authority. The use of generative AI in PAI therefore requires a critical distinction between the ability of AI to generate plausible text and the responsibility of teachers to establish the validity of religious knowledge (Miao & Cukurova, 2024; UNESCO, 2021).

In this context, AI-generated explanations should be regarded as provisional learning materials rather than authoritative sources of Islamic knowledge. Before being incorporated into classroom instruction, such content should be examined through comparison with authoritative primary sources, including the Qur'an and authentic Hadith, as well as recognized scholarly interpretations and relevant academic literature. Verification is particularly important when AI produces quotations from religious texts, references to classical scholars, legal opinions, or explanations of theological concepts. Teachers should examine not only whether a particular statement appears reasonable but also whether its source exists, whether the quotation is accurate, and whether the interpretation corresponds with the broader context of the source. This process transforms AI use from a simple activity of content generation into a process of epistemic evaluation, in which teachers retain responsibility for determining what knowledge is appropriate to communicate to students (Mishra & Koehler, 2006; Miao & Cukurova, 2024).

The verification process should also involve contextual and curricular judgment. A religious statement may be technically correct in a particular scholarly context but inappropriate if presented without the qualifications, historical circumstances, or interpretive framework that give it meaning. Therefore, PAI teachers need to evaluate AI-generated content in relation to the learning outcomes, curriculum, students' developmental characteristics, and the objectives of Islamic education. Such evaluation is consistent with the broader understanding of technological integration in which technology should serve pedagogical and content-related purposes rather than determine them. In this regard, the teacher acts as a mediator between AI-generated information and students' religious understanding, selecting, modifying, contextualizing, or

rejecting AI outputs according to established educational and religious criteria (Mishra & Koehler, 2006).

Ultimately, the content dimension of AI literacy in PAI can be understood as a form of epistemic responsibility. Teachers are not simply expected to know how to obtain information from AI but must also possess the intellectual and ethical capacity to determine whether that information deserves to be taught, discussed, or transmitted to students. This responsibility becomes increasingly important as students may encounter AI-generated religious information independently through chatbots, search engines, social media, and other digital platforms. PAI teachers therefore have an important role in developing students' own critical religious literacy by demonstrating how claims should be questioned, sources should be examined, and interpretations should be contextualized. In this way, AI literacy contributes not only to technological competence but also to the development of a responsible culture of knowledge in Islamic education, where accuracy, scholarly accountability, contextual understanding, and ethical responsibility remain central (UNESCO, 2021; Miao & Cukurova, 2024)

The third implication concerns the centrality of *adab* and *amanah* in the integration of artificial intelligence into Islamic Religious Education (PAI). Islamic education is fundamentally concerned with the formation of persons, rather than merely the optimization of information delivery or learning efficiency. Within this perspective, technology should function as an instrument that supports educational purposes without displacing the moral and relational foundations of teaching. Generative AI can assist teachers in preparing learning materials, personalizing activities, providing feedback, and improving administrative efficiency. However, these functions do not eliminate the teacher's responsibility to cultivate students' character, attitudes, and ethical dispositions. The teacher remains a moral agent whose presence, judgment, and example contribute significantly to the formation of students' *adab*. Thus, the success of AI integration in PAI should be evaluated not only according to technological effectiveness but also according to its contribution to the broader purposes of Islamic education (Holmes et al., 2019; Selwyn, 2019).

The concept of *amanah* further strengthens the ethical responsibility of teachers when employing AI. In Islamic education, teaching is not simply a professional activity but also a responsibility entrusted to educators to guide students toward knowledge, virtue, and responsible conduct. The use of AI therefore requires teachers to exercise careful judgment regarding the accuracy of information, the appropriateness of learning materials, student privacy, and the potential consequences of automated recommendations. Teachers should not delegate educational decisions entirely to AI systems simply because such systems appear efficient or sophisticated. Instead, AI-generated outputs should remain subject to human oversight and ethical consideration. In this sense, *amanah* provides an Islamic ethical framework for understanding AI use as a responsibility that requires accountability for both the processes and consequences of technology-mediated teaching (Selwyn, 2019; UNESCO, 2021).

The relational dimension of education also demonstrates the limits of artificial intelligence in PAI. Although AI can simulate dialogue, generate individualized feedback, and respond to students' questions, it cannot fully assume the emotional, spiritual, and interpersonal responsibilities of a human teacher. Certain educational situations require sensitivity to students' backgrounds, emotional conditions, moral struggles, and interpersonal relationships—dimensions that cannot be reduced to computational interaction. A teacher may need to recognize when a student's question reflects confusion, anxiety, ethical uncertainty, or a deeper personal concern that requires empathy and human engagement rather than an automated response. Therefore, AI should be positioned as a complementary resource that expands teachers' pedagogical capacity while preserving the teacher–student relationship as a central component of Islamic education. This approach is consistent with critical scholarship on AI in education,

which emphasizes that educational technologies should be assessed in relation to human agency, relationships, and the purposes of education rather than efficiency alone (Holmes et al., 2019; Selwyn, 2019).

Finally, the principles of *adab* and *amanah* imply that teachers themselves must become ethical models of AI use. Students learn values not only through explicit instruction but also through observing how teachers behave, make decisions, acknowledge limitations, and use knowledge responsibly. When teachers transparently explain that AI-generated information requires verification, acknowledge uncertainty, respect intellectual property, and demonstrate appropriate boundaries in using technology, they provide students with practical examples of responsible digital behavior. Conversely, excessive dependence on AI may unintentionally communicate that convenience is more important than intellectual effort, authenticity, or human responsibility. Consequently, AI literacy in PAI should incorporate an ethical dimension in which technological competence is integrated with *adab*, *amanah*, human agency, and exemplary conduct. Such an orientation ensures that technological innovation remains subordinate to the fundamental mission of Islamic education: the formation of knowledgeable, ethical, responsible, and morally grounded human beings (Holmes et al., 2019; Selwyn, 2019; UNESCO, 2021).

The fourth implication concerns the assessment dimension of Islamic Religious Education (PAI). The increasing availability of Generative Artificial Intelligence (GenAI) challenges conventional assessment formats that rely heavily on generic essays, take-home assignments, and questions that can easily be answered through AI-generated text. When students can obtain sophisticated responses within seconds, the mere submission of a polished written product provides increasingly limited evidence of their individual understanding, reasoning, and learning process. This does not necessarily mean that essays or written assignments should be abandoned, but rather that their design and purpose need to be reconsidered. Assessment should increasingly examine students' ability to interpret information, construct arguments, justify their positions, evaluate sources, and connect religious knowledge with specific contexts. In this regard, GenAI functions not simply as a technological disruption but as a catalyst for rethinking what constitutes meaningful evidence of learning in PAI (Kasneci et al., 2023; Cotton et al., 2024).

Rather than attempting to prohibit every form of AI use, PAI teachers can redesign assessment activities so that they emphasize processes that are more difficult to outsource entirely to generative systems. These may include oral examinations, classroom presentations, reflective journals, source-comparison tasks, case-based analysis, collaborative projects, demonstrations of religious practices, and authentic performance-based assessments. For example, students may be asked to compare an AI-generated explanation of a Qur'anic concept with the original Qur'anic text and recognized scholarly interpretations, identify weaknesses in the AI response, and provide a reasoned correction. Such tasks assess not only the final answer but also the student's capacity to investigate, interpret, evaluate, and defend knowledge claims. This approach is particularly relevant to PAI because religious learning involves intellectual understanding as well as interpretation, ethical reasoning, reflection, and the application of values in concrete situations (Kasneci et al., 2023; UNESCO, 2021).

Assessment redesign should also be accompanied by explicit requirements concerning the disclosure and documentation of AI use. Students can be asked to state whether they used GenAI, which stages of the assignment involved AI assistance, what prompts or types of assistance were used, and how the resulting information was verified or modified. Such disclosure transforms AI use from a hidden activity into an observable component of the learning process. It also enables teachers to distinguish between legitimate uses of AI—for example, brainstorming, language improvement, or generating alternative perspectives—and inappropriate uses, such as submitting AI-generated work as the student's own or using fabricated references without verification. Clear institutional and course-level guidelines are therefore necessary to establish

shared expectations concerning authorship, attribution, transparency, and academic integrity (Cotton et al., 2024; Miao & Cukurova, 2024).

Ultimately, the emergence of GenAI suggests that the purpose of assessment in PAI should move beyond policing technological tools toward cultivating responsible AI literacy and academic integrity. An effective assessment system should encourage students to demonstrate that they can use AI critically without surrendering their intellectual agency or ethical responsibility. The central question is therefore not simply whether students have used AI, but whether they can use it appropriately, transparently, critically, and responsibly within the boundaries of academic and Islamic values. By incorporating process-oriented, authentic, reflective, and dialogic forms of assessment, PAI can transform the challenge posed by GenAI into an opportunity to strengthen higher-order thinking, source evaluation, ethical reasoning, and independent learning. In this model, assessment becomes an important mechanism for ensuring that technological innovation contributes to the formation of academically honest and digitally responsible Muslim learners rather than encouraging dependence on automated knowledge production (Kasneci et al., 2023; Cotton et al., 2024; Selwyn, 2019).

The fifth implication concerns the professional development of teachers as a fundamental condition for sustaining AI competence in Islamic Religious Education (PAI). One-off workshops that focus primarily on teaching educators how to operate a particular AI platform are unlikely to produce durable professional competence because generative AI technologies, platforms, and interfaces continue to evolve rapidly. Technical knowledge tied to a specific application may become obsolete as new models and tools emerge. Therefore, professional development should move beyond application-oriented training toward the development of transferable competencies that enable teachers to adapt to technological change. Such competencies include understanding fundamental AI concepts, formulating effective prompts, critically evaluating AI-generated outputs, selecting appropriate pedagogical strategies, protecting data and privacy, designing meaningful assessments, and reflecting systematically on the consequences of AI use in educational practice (Miao & Cukurova, 2024).

A sustainable professional development model should also integrate technological knowledge with pedagogical and content knowledge rather than treating AI as an isolated technical skill. For PAI teachers, this integration is particularly important because the effectiveness of AI depends on how well it is connected to learning objectives, Islamic content, student characteristics, instructional strategies, and ethical considerations. Professional learning activities should therefore provide opportunities for teachers to experiment with AI in authentic teaching situations, develop AI-supported lesson plans, evaluate generated religious content, and discuss potential pedagogical and ethical challenges with colleagues. This approach corresponds with the TPACK perspective, which emphasizes that meaningful technology integration emerges from the interaction between technological, pedagogical, and content knowledge rather than from technological proficiency alone (Mishra & Koehler, 2006). Accordingly, AI professional development should position teachers as reflective pedagogical decision-makers rather than merely as users of digital applications.

The progression proposed in UNESCO's AI competency framework offers a useful foundation for structuring such professional development. The movement from acquiring basic knowledge toward deepening competencies and eventually creating or transforming educational practices provides a developmental pathway rather than a one-time training model (Miao & Cukurova, 2024). At the initial level, PAI teachers need to understand fundamental AI concepts, opportunities, limitations, and ethical risks. At the deeper level, teachers should be able to integrate AI into curriculum design, teaching strategies, source verification, assessment, and student learning while maintaining human oversight. At the most advanced level, teachers can develop innovative AI-supported pedagogical practices, contribute to institutional guidelines,

share good practices with colleagues, and critically evaluate the broader implications of AI for Islamic education. Such progression allows professional development to accommodate different levels of teacher readiness and prevents AI competency from being reduced to a checklist of technical skills.

Recent intervention-oriented research further suggests that structured professional development can strengthen teachers' AI competency when training is sustained, contextualized, and connected to pedagogical knowledge rather than delivered as isolated technical instruction. Professional learning should therefore include continuous mentoring, collaborative lesson design, peer discussion, classroom experimentation, reflection, and evaluation of actual AI-supported teaching practices. For PAI, this model can be strengthened by incorporating dimensions of epistemic responsibility, *adab*, *amanah*, academic integrity, data protection, and human agency. The ultimate objective is not to produce teachers who simply know how to use the latest AI tools, but educators who can continually adapt to technological developments while preserving the pedagogical, ethical, and religious purposes of Islamic education. In this sense, professional development becomes a long-term mechanism for ensuring that AI competency remains dynamic, context-sensitive, and aligned with the professional identity and responsibilities of PAI teachers (Miao & Cukurova, 2024; Enhancing teachers' AI competency, 2025).

The proposed model also addresses a gap between global AI competency frameworks and the contextual needs of Islamic education. UNESCO provides a strong universal foundation, but PAI requires additional attention to religious epistemology, moral formation, and culturally situated educational relationships. The model therefore does not replace UNESCO's framework; it contextualizes it. The five dimensions correspond to global AI competency concerns while adding a stronger content-verification and Islamic ethical orientation. This contextualization is the principal conceptual contribution of the study.

There are also important institutional implications. Schools, madrasahs, and Islamic higher-education institutions should not leave AI use entirely to individual teachers. Institutional guidance should define acceptable and unacceptable uses, data protection, disclosure of AI assistance, source verification, intellectual property, student privacy, and procedures for responding to inaccurate AI-generated religious content. Such policy should be developed through consultation with teachers, curriculum leaders, technology specialists, and Islamic education scholars. In this way, teacher competence and institutional governance can reinforce one another.

The model has limitations. First, it is a conceptual synthesis and has not yet been validated through expert Delphi procedures or field intervention. Second, the PAI context is diverse across schools, madrasahs, pesantren, and higher education, so the indicators may require adaptation. Third, AI technologies change rapidly, meaning that the model should emphasize stable competencies rather than fixed platforms. Future research should validate the model with PAI teachers, develop an assessment instrument, test its effect through professional-development interventions, and compare implementation across educational levels and regions.

Conclusion (خاتمة)

This study concludes that integrating artificial intelligence into Islamic Religious Education (PAI) requires a pedagogical model that goes beyond technical proficiency. AI competence should be grounded in pedagogical judgment, epistemic responsibility, ethical values, assessment redesign, and continuous professional development. The proposed model positions teachers as responsible human decision-makers who use AI selectively while maintaining the

authority of pedagogical, religious, and ethical judgment. At the learner level, the model is strengthened through the Islamic values of *tabayyun*, *amānah*, *wasaṭiyyah*, and *maṣlaḥah*, which promote verification, integrity, moderation, and beneficial digital participation. Thus, AI integration in PAI should not be understood merely as technological innovation, but as an opportunity to transform Islamic education toward a more critical, ethical, human-centered, and future-ready learning ecosystem..

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The proposed framework may also contribute to curriculum development in teacher education. Courses on PAI pedagogy can incorporate AI literacy into lesson planning, assessment, microteaching, and reflective practice. Rather than adding a separate technical course only, AI competencies can be embedded across existing courses such as curriculum development, instructional media, assessment, and educational research. Student teachers can be asked to critique AI-generated lesson plans, construct verified learning materials, conduct source-based prompt experiments, and redesign assessments. Such activities can prepare future PAI teachers to treat AI critically from the beginning of their professional formation.

For educational leaders, implementation should be accompanied by a minimum governance package. First, institutions should define categories of permitted, restricted, and prohibited AI use. Second, they should establish data-protection procedures and prohibit teachers or students from entering confidential personal information into public AI systems. Third, they should require disclosure when AI materially contributes to an academic product. Fourth, institutions should establish a verification expectation for religious and scholarly claims. Fifth, teacher evaluation should recognize responsible experimentation and reflection rather than measuring AI use by frequency alone. These measures create conditions in which innovation and accountability can develop together.

The model also supports differentiated professional development. Teachers at the acquire level may need foundational workshops on AI concepts, prompting, privacy, copyright, and verification. Teachers at the deepen level require collaborative lesson-design sessions, peer observation, assessment redesign, and guided experimentation. Teachers at the create level can become mentors who lead school-based inquiry, formulate institutional guidelines, and develop contextual resources. This progression prevents professional development from becoming a one-size-fits-all technology seminar. It also creates a pathway from individual competence toward institutional capacity.

This distinction is particularly relevant to PAI because learning outcomes include dimensions that are difficult to capture through automated text production. Understanding a Qur'anic verse, for instance, involves more than producing a plausible explanation. Students need to learn how to read context, distinguish translation from interpretation, recognize the role of scholarly tradition, and relate knowledge to ethical action. AI can provide preliminary explanations or alternative representations, but the teacher must design opportunities for students to examine evidence and practice judgment. Consequently, the model places verification between implementation and reflection rather than treating verification as an optional final step.

A practical consequence of the model is the need to distinguish between substitutional and transformative uses of AI. Substitutional use occurs when AI merely accelerates a task that the teacher could already perform, such as drafting a worksheet or generating routine questions.

Such use can be beneficial, but it does not automatically improve pedagogy. Transformative use occurs when AI enables a different learning process—for example, students compare several AI-generated interpretations of a religious concept, identify unsupported claims, return to primary sources, and construct a reasoned conclusion. In this pattern, AI becomes an object of critical inquiry as well as a supporting tool. The teacher's competence lies in designing the intellectual process surrounding the technology.

A further consideration is equity. Access to AI tools varies according to school resources, connectivity, language support, and teacher familiarity with digital technologies. A model that assumes universal access may unintentionally widen existing disparities. PAI institutions should therefore prioritize low-cost and accessible tools, provide shared institutional resources where possible, and ensure that core learning objectives remain achievable without dependence on a commercial platform. Teachers should also recognize linguistic limitations because AI systems may perform differently across Indonesian, Arabic, local languages, and mixed-language religious discourse. Equity is therefore part of pedagogical competence, not merely an infrastructure issue.

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