Beyond AI Competence: Ethical-Pedagogical Agency in Primary Islamic Education

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Abstract

The growing use of generative artificial intelligence (GenAI) in education has intensified questions about teacher competence, ethical responsibility, and professional learning. This conceptual paper develops a provisional account of ethical-pedagogical agency for primary Islamic education. It asks how teachers mobilise professional resources when evaluating AI-generated material, how professional learning may support the revision of judgment, and how contextual conditions shape the enactment of decisions. The paper uses a critical conceptual synthesis of scholarship on teacher agency, AI competence, professional learning, AI ethics, and Islamic education. Rather than claiming to conduct a systematic review, it compares the explanatory focus of selected frameworks and uses that comparison to develop a conceptual model. The analysis distinguishes professional resources from situated professional judgment and from the enactment of decisions. Ethical-pedagogical agency is specified through four provisional dimensions: epistemic discernment, ethical deliberation, context-sensitive pedagogical judgment, and accountable professional justification. Professional learning is treated as a potential developmental process rather than an automatic cause of agency, while epistemic, pedagogical, ethical, and institutional conditions are proposed as boundary conditions. The paper contributes a set of theoretical propositions that can guide empirical investigation and professional development. The model is not empirically validated; further studies are needed to assess its conceptual distinctiveness, practical observability, and explanatory value across varied primary Islamic education settings.

Keywords: ethical-pedagogical agency, generative artificial intelligence, teacher professional learning, Islamic education, teacher agency

Introduction

The rapid development of generative artificial intelligence (GenAI) has expanded the possibilities for producing educational explanations, lesson plans, learning activities, assessment materials, and other instructional resources. These developments have also intensified questions about teachers' professional responsibilities when AI-generated outputs are incorporated into educational practice. Teachers are increasingly required not only to understand how AI systems operate, but also to evaluate their outputs, determine their educational suitability, and decide whether and how they should be used (Kasneci et al., 2023; Tlili et al., 2023; UNESCO, 2023; Zawacki-Richter et al., 2019).

International policy frameworks have responded by emphasising human-centred AI, ethical awareness, pedagogical integration, and continuing professional learning. Miao and Cukurova's (2024) AI Competency Framework for Teachers, for example, organises teacher competencies around human-centred thinking, AI ethics, AI foundations and applications, AI pedagogy, and AI for professional learning. This multidimensional approach demonstrates that responsible AI integration cannot be reduced to technical proficiency alone. The wider literature also cautions that AI literacy is not reducible to technical operation alone (Almatrafi et al., 2024; Chiu et al., 2024; Sperling et al., 2024).

Nevertheless, identifying the competencies teachers should develop does not fully explain how those competencies are mobilised in particular instructional situations. Teachers may understand general principles of AI ethics while remaining uncertain about the reliability of a specific output, its suitability for particular learners, or the appropriate response when educational objectives conflict with practical constraints (Anisa & Hasanah, 2025). Understanding teachers' engagement with GenAI therefore requires attention not only to professional resources, but also to the judgments teachers exercise and the conditions under which those judgments are enacted.

Teacher agency provides an important theoretical perspective for examining this problem. Ecological approaches conceptualise agency as something achieved through the interaction of teachers' experiences, future-oriented aspirations, practical evaluations, and the structural and cultural conditions of professional practice (Priestley et al., 2015). From this perspective, teachers' professional actions cannot be explained solely by individual knowledge or competence. Related accounts of agency emphasise the interaction between personal capacity, professional purpose, and social or institutional conditions (Bandura, 2001; Biesta & Tedder, 2007; Priestley et al., 2015).

Research on AI in education has also examined the relationship between teacher agency, ethical challenges, and professional learning. Mouta, Torrecilla-Sánchez, et al. (2025) investigate professional learning for teacher agency in addressing ethical challenges associated with AI in education. Related work explores the interplay between AI technologies and human agency across subjective, intersubjective, and collective dimensions (Mouta, Pinto-Llorente, et al., 2025). These contributions establish that agency and professional learning are already central concerns in scholarship on ethical AI integration.

The theoretical problem addressed here is therefore not an absence of research on teacher agency or AI ethics. Rather, it concerns how existing perspectives can be used to examine the relationship between professional resources and decisions about particular AI-generated outputs. A teacher's competence or awareness of ethical principles does not, by itself, establish how the teacher evaluates a specific knowledge claim, weighs competing pedagogical and ethical considerations, justifies a decision, or acts when institutional conditions constrain available options.

This paper approaches that problem through the concept of ethical-pedagogical agency. The construct is intended to direct analytical attention to the situated exercise of professional judgment: how teachers mobilise relevant knowledge, competencies, values, and experience to evaluate and respond to AI-generated outputs. It also distinguishes professional judgment from the enactment of decisions, recognising that teachers may identify a defensible course of action without having sufficient authority, resources, or institutional support to implement it as intended.

Primary Islamic education provides a relevant context for examining these relationships because teachers may need to evaluate AI-generated religious information while considering curriculum requirements, learners' developmental characteristics, and their responsibilities for pedagogical mediation. Questions about source provenance, the reliability of religious references, and the adequacy of explanations may become particularly consequential when AI-generated content is used to teach Qur'anic verses, hadith, Islamic concepts, or religious practices. More general discussions of AI ethics similarly emphasise human oversight, accountability, and context-sensitive governance (Floridi et al., 2018; Holmes et al., 2022; UNESCO, 2023).

Emerging research has addressed several of these concerns. Samirah et al. (2025) propose a framework for AI-related teacher professional development in Islamic education, integrating digital competence, pedagogical innovation, professional learning, ethical governance, reflective practice, and Islamic values. Mat Yusoff et al. (2026) examine ethical GenAI integration in Islamic religious education, highlighting the importance of human mediation and source verification. These studies demonstrate that AI-related professional development and the integrity of religious knowledge are already recognised concerns in the field.

The present paper does not assume that Islamic education is uniform across institutions or that its epistemic standards can be reduced to a single set of procedures. Rather, primary Islamic education is treated as a context in which the proposed relationships can be examined in greater detail. Teachers may need to consider whether a religious claim can be verified, whether its explanation is appropriate for a particular learning objective, and whether further consultation is necessary before the material is used. The availability of reliable sources, qualified expertise, institutional guidance, and professional discretion may influence both the judgments teachers form and their ability to act on them.

The significance of this context therefore lies not simply in the subject matter being religious. It lies in how subject-specific epistemic responsibilities interact with pedagogical judgment, professional accountability, and institutional conditions in particular instructional decisions.

Existing scholarship offers complementary perspectives on teachers' engagement with AI. Competency frameworks identify relevant knowledge, skills, and values (Miao & Cukurova, 2024); ecological theories explain the situated and relational achievement of teacher agency (Priestley et al., 2015); research on professional learning examines how teachers may be supported in addressing ethical challenges associated with AI (Mouta, Torrecilla-Sánchez, et al., 2025); and Islamic education scholarship has proposed frameworks for professional development and examined concerns surrounding religious knowledge and AI integration (Mat Yusoff et al., 2026; Samirah et al., 2025). Related debates also draw on teacher knowledge and pedagogical integration (Mishra & Koehler, 2006; Shulman, 1986), while work on professional development highlights the importance of sustained, practice-connected learning (Desimone, 2009; Timperley et al., 2007).

These contributions should not be interpreted as isolated or inherently incompatible approaches. However, their relationship raises a question that warrants further theoretical examination: to what extent can existing perspectives jointly explain how teachers mobilise professional resources to evaluate and justify decisions about particular AI-generated outputs,

how professional learning may contribute to the revision of such judgments, and how contextual conditions shape the enactment of decisions?

This is a candidate theoretical gap rather than an established absence in the literature. Existing frameworks may already explain some or all of these relationships. The task of this paper is therefore to compare their analytical purposes and explanatory mechanisms, identify the relationships that warrant further specification, and assess whether a decision-level account can offer additional conceptual precision. The proposed contribution must be evaluated through this comparison rather than assumed from the introduction of a new term.

To address this problem, the paper distinguishes four analytically related elements: professional resources, situated professional judgment, the enactment of professional decisions, and professional learning as a potential developmental process. It also examines epistemic, pedagogical, ethical, and institutional conditions that may influence these relationships. Ethical-pedagogical agency is proposed as the central construct for analysing the situated exercise of professional judgment, while its observable manifestations are examined through teachers' decisions to verify, adapt, use, defer, or reject AI-generated outputs.

The aim of this conceptual paper is to develop a provisional theoretical account of ethical-pedagogical agency that clarifies the relationships among professional resources, situated professional judgment, the enactment of decisions, and professional learning in primary Islamic education. The paper seeks to specify the analytical dimensions of the construct, examine its relationship with existing frameworks, and identify contextual conditions and propositions that can guide future empirical research.

The paper's intended contribution is a provisional explanatory account that makes explicit the analytical distinction between professional resources, the situated exercise of judgment, and the enactment of decisions. It proposes four dimensions for examining professional judgment—epistemic discernment, ethical deliberation, context-sensitive pedagogical judgment, and accountable professional justification—and positions professional learning as a potential process through which judgments may be examined and revised. The model further proposes that the enactment of agency depends on the interaction between professional judgment and the conditions of practice.

This contribution is intended to complement, rather than replace, existing competency and agency frameworks. Its explanatory value will depend on whether the proposed distinctions clarify teachers' decisions more precisely than the frameworks from which the account draws. The model therefore remains provisional and requires further comparative theoretical analysis and empirical investigation before its conceptual boundaries, relationships, and applicability can be established.

The paper brings together five strands of scholarship. First, ecological and sociocultural accounts of teacher agency frame professional action as situated and temporally formed rather than as a stable individual possession (Biesta & Tedder, 2007; Eteläpelto et al., 2013; Priestley et al., 2015). Second, AI-competence and AI-literacy frameworks map knowledge, skills, ethical awareness, and pedagogical application, but their categories require interpretation in relation to particular professional decisions (Miao & Cukurova, 2024; Mikeladze et al., 2024; Ng et al., 2021; Sperling et al., 2024).

Third, reviews of AI in education document opportunities for personalisation and instructional support alongside risks involving bias, opacity, privacy, assessment, and over-reliance (Crompton & Burke, 2023; Kasneci et al., 2023; Liu & Zhong, 2024; Zawacki-Richter

et al., 2019). Fourth, ethical frameworks call for human agency, transparency, accountability, and context-sensitive governance rather than a purely technical approach to AI adoption (Floridi et al., 2018; Holmes et al., 2022; Jobin et al., 2019; OECD, 2023; UNESCO, 2021, 2023). Fifth, scholarship on professional learning suggests that teacher development is more likely to be meaningful when it is sustained, collaborative, and connected to authentic practice (Desimone, 2009; Timperley et al., 2007; Wenger, 1998). Broader histories of AI in education and primary-school AI-literacy frameworks further underline the importance of attending to context and educational purpose (Williamson & Eynon, 2020; Yim, 2024).

Research directly addressing AI in Islamic education is emerging and includes proposals for teacher professional development, critical thinking, and ethical integration (Hanifaa & As'ad, 2025; Hoeruman et al., 2025; Mat Yusoff et al., 2026; Samirah et al., 2025). These works mean that neither teacher agency, AI ethics, nor Islamic education can be treated as unexplored topics. The present paper instead examines whether the relationships among competence, situated judgment, professional learning, and contextual conditions can be specified more explicitly for teachers' decisions about GenAI-generated material in primary Islamic education.

Methods

Research Design

This article uses a conceptual theory-development design based on critical conceptual synthesis. Its purpose is to clarify constructs and propose relationships among them, not to estimate effects or report primary empirical findings. The synthesis is informed by conceptual analysis and comparative reading across literature on teacher agency, AI competence, professional learning, AI ethics, and Islamic education.

Materials and Scope

The source base comprises theoretical books, international guidance documents, and peer-reviewed research directly relevant to the paper's central constructs. Priority was given to sources that define teacher agency, specify AI-related teacher competencies, analyse professional learning for ethical AI use, or address AI in educational and Islamic educational contexts. The paper does not claim exhaustive database coverage, a reproducible systematic search, or a formal quality appraisal; therefore, it should not be interpreted as a systematic or scoping review.

Analytical Procedure

The analysis proceeded in four conceptual steps. First, key constructs were identified and provisionally defined. Second, the explanatory focus of the selected frameworks was compared, particularly whether they foreground professional resources, situated judgment, decision enactment, professional learning, or context. Third, recurring relationships and possible points of conceptual ambiguity were used to formulate a provisional model. Fourth, the model was expressed as analytical dimensions and propositions that can be examined in subsequent empirical research. The propositions are theoretical expectations, not findings from hypothesis testing.

Analytical Limitations

Because the paper is a critical conceptual synthesis, selection of literature is purposive and interpretive. It does not establish the prevalence of a research gap, validate the proposed dimensions, or demonstrate causal relationships. The claims are accordingly framed as a

candidate theoretical contribution that requires comparison with additional literature and empirical examination.

Results

Conceptual Finding 1: Ethical-Pedagogical Agency as Situated Judgment

This paper conceptualises ethical-pedagogical agency as the situated exercise of professional judgment through which teachers mobilise relevant knowledge, competencies, values, and experience to evaluate and respond to AI-generated outputs in ways that are epistemically informed, ethically defensible, pedagogically appropriate, and responsive to the conditions of practice.

The construct is distinguished from AI competence without treating the two as unrelated. AI competence concerns relevant professional resources; ethical-pedagogical agency concerns how such resources are mobilised in the exercise of judgment in particular instructional situations. The construct is also distinguished from the actions through which judgment is enacted. A decision to verify, adapt, use, defer, or reject an AI-generated output is an observable manifestation of professional judgment, but the action alone does not establish the quality of the reasoning behind it.

Consistent with ecological perspectives on teacher agency (Priestley et al., 2015), the proposed construct is not treated as a fixed personal attribute that operates independently of context. Its enactment may vary according to the task, available evidence, learners' needs, institutional arrangements, and the opportunities or constraints teachers encounter.

Conceptual Finding 2: Four Provisional Analytical Dimensions

Epistemic discernment refers to the situated evaluation of the credibility, provenance, accuracy, and adequacy of AI-generated information for a particular instructional purpose. It involves determining what can reasonably be accepted, what requires verification, what remains uncertain, and when available evidence is insufficient to justify instructional use.

In primary Islamic education, this may involve examining whether a Qur'anic quotation, hadith reference, translation, or religious explanation can be traced to an appropriate source. The criteria used may vary according to the claim, instructional purpose, and relevant institutional standards. Epistemic discernment depends on professional resources such as subject knowledge, source literacy, and the ability to recognize uncertainty.

Ethical deliberation refers to the consideration of responsibilities, competing values, potential harms, and implications associated with using AI-generated outputs in educational practice. Relevant concerns may include privacy, fairness, transparency, attribution, human responsibility, and the appropriateness of delegating particular decisions to AI systems.

Ethical deliberation is not equivalent to general awareness of ethical principles. It concerns how those principles inform a decision under specific circumstances. In Islamic education, this may include responsibility for mediating religious knowledge and avoiding the presentation of uncertain claims as authoritative. The relevant standards must be examined in their educational and institutional contexts rather than assumed to be uniform.

Context-sensitive pedagogical judgment concerns the evaluation of whether and how AI-generated outputs serve curricular objectives, subject matter, learners' developmental characteristics, instructional methods, and classroom conditions.

An output may be technically coherent but too complex for primary-school learners, poorly aligned with a learning objective, or unsuitable for a particular learning activity.

Teachers may therefore need to simplify, contextualize, supplement, restructure, or reject it. The focus is not simply whether teachers can operate an AI tool, but whether they can explain how a particular use serves the intended educational purpose.

Accountable professional justification refers to teachers' capacity to explain and defend the reasons for their decisions in relation to relevant evidence, educational purposes, ethical responsibilities, and professional expectations.

It directs attention to whether teachers can articulate why an output was accepted, adapted, verified, deferred, or rejected. A decision is not defensible merely because it involves human review or departs from an AI recommendation; its justification depends on the adequacy of the reasoning and evidence in relation to the situation.

This dimension is related to, but distinct from, the other three. Epistemic discernment concerns knowledge claims, ethical deliberation concerns responsibilities and competing values, and pedagogical judgment concerns educational suitability. Accountable professional justification concerns how the resulting decision is explained and made open to professional scrutiny.

Conceptual Finding 3: Professional Learning as a Developmental Process

Professional learning is positioned as a potential process through which teachers may examine, revise, and refine their professional judgments. Reflection, collaborative deliberation, feedback, and review of instructional practice may provide opportunities to reconsider evidence, assumptions, and previous decisions. This position builds on research linking professional learning with teacher agency in addressing ethical challenges associated with AI (Mouta, Torrecilla-Sánchez, et al., 2025).

The proposed account does not assume that professional learning is a defining dimension of ethical-pedagogical agency or that participation in professional development necessarily produces appropriate judgment. Its contribution may depend on the relevance of learning activities, the quality of evidence and feedback, opportunities to apply new insights, and the conditions supporting continued reflection. The relationship should therefore be examined through changes in teachers' reasoning and decisions rather than inferred solely from participation or self-reported confidence.

Conceptual Finding 4: Theoretical Propositions

The following propositions articulate provisional relationships for theoretical scrutiny and empirical investigation. They are not established causal findings.

Proposition 1: Professional resources and situated judgment. The availability of AI competence, subject knowledge, pedagogical knowledge, and professional experience provides resources for ethical-pedagogical judgment, but the enactment of agency depends on how teachers mobilize these resources in relation to the demands of a particular instructional situation.

Proposition 2: Evaluation, justification, and professional decisions. Ethical-pedagogical agency is manifested in the relationship between teachers' evaluation of AI-generated outputs and their ability to justify decisions to verify, adapt, use, defer, or reject those outputs in relation to relevant epistemic, ethical, pedagogical, and professional considerations. The appropriateness of a decision cannot be inferred from the action selected alone.

Proposition 3: Professional learning and the revision of judgment. Professional learning that provides opportunities for evidence-based reflection, collaborative deliberation, feedback, and review of instructional decisions may support the development and revision of ethical-

pedagogical judgment. Its contribution may depend on the relevance of learning activities, the quality of evidence and feedback, and opportunities to apply and reconsider judgments in practice.

Proposition 4: Contextual conditions and the enactment of agency. The relationship between professional judgment and enacted decisions is shaped by the interaction of epistemic, pedagogical, ethical, and institutional conditions. These conditions may enable, constrain, or redirect teachers' actions, such that recognizing a defensible course of action does not necessarily guarantee the ability to implement it.

Proposition 5: Context-sensitive epistemic and pedagogical judgment in primary Islamic education. When teachers evaluate AI-generated content for primary Islamic education, the enactment of ethical-pedagogical agency may depend on how the verifiability and adequacy of religious information are considered alongside curricular purposes, learners' developmental characteristics, and responsibilities for pedagogical mediation (Andre Fikar Al Mardhafi et al., 2026). Where these considerations cannot be adequately resolved, teachers may need to seek further evidence or qualified advice, adapt the material, defer its use, or reject it.

Together, these propositions specify relationships among professional resources, situated judgment, decisions and their justification, professional learning, and contextual conditions. They remain open to refinement, rejection, or reformulation through comparative theoretical analysis and empirical research.

Conceptual Model

The proposed model distinguishes five analytically related elements: professional resources, situated professional judgment, the enactment of decisions, contextual conditions, and professional learning as a potential developmental process.

Professional resources—including AI competence, subject knowledge, pedagogical knowledge, experience, and relevant values—provide a basis for judgment but do not determine decisions in every situation. Ethical-pedagogical agency is examined through the four provisional analytical dimensions described above. The resulting judgment may be enacted through decisions to verify, adapt, use, defer, or reject AI-generated outputs.

Judgment and enactment are analytically distinct. A teacher may identify a defensible course of action but lack the resources, authority, time, or institutional support required to implement it. Conversely, an action may occur without a sufficiently articulated professional justification. The model therefore directs attention to both the reasoning behind a decision and the conditions under which it is enacted.

Contextual conditions may influence professional resources, judgment, and enactment rather than operating only at the end of a linear process. Professional learning may also support the review and revision of judgment, while experience with enacted decisions may provide material for subsequent reflection. The model consequently represents proposed relationships rather than a validated causal sequence.

In primary Islamic education, the model makes it possible to examine how the verification of religious information, pedagogical mediation, learner needs, and institutional arrangements interact in particular decisions. Its conceptual adequacy and explanatory value must be established through further comparison and empirical investigation.

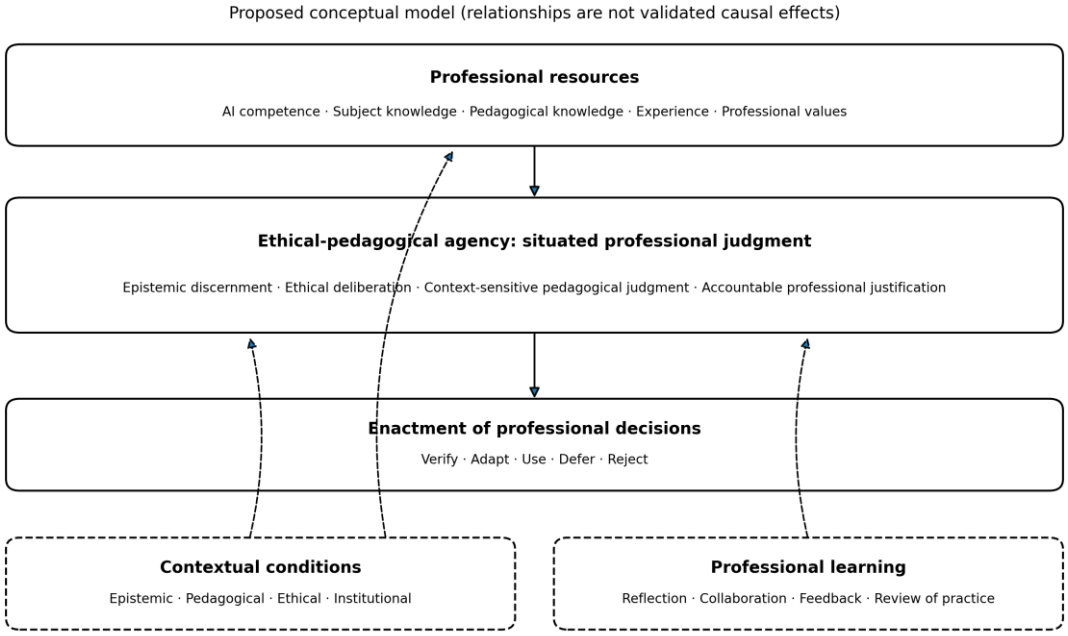


Figure 1. Provisional model of ethical-pedagogical agency in primary Islamic education.
Note. Arrows indicate proposed relationships for theoretical examination, not validated causal effects. Contextual conditions may influence professional resources, judgment, and enactment; professional learning may support review and revision of judgment.

Discussion

Contextual Boundary Conditions

The enactment of ethical-pedagogical agency may depend on the availability and adequacy of evidence for evaluating AI-generated claims. Access to reliable sources, relevant subject expertise, and opportunities for qualified consultation may enable teachers to justify decisions more confidently. Where sources are inaccessible, contradictory, or difficult to verify, teachers may need to defer or reject the use of an output. These possibilities require investigation rather than being assumed to operate identically in every case.

Pedagogical conditions include learning objectives, curriculum requirements, learner characteristics, instructional methods, and the practical opportunities available for adapting AI-generated materials. An output may be factually plausible but unsuitable for a particular age group or learning purpose. The relationship between professional judgment and enactment may therefore vary according to the extent to which teachers can adapt materials and align them with the needs of their learners.

Ethical conditions include privacy, fairness, transparency, attribution, human responsibility, and potential harm. Their relevance depends on the task and the nature of the AI application (Anisa & Hasanah, 2025). Teachers may encounter competing responsibilities or uncertainty about the appropriate response. The proposed account therefore treats ethical deliberation as a situated process rather than assuming that a general list of principles will resolve every case.

Institutional conditions include school guidance, leadership practices, available resources, collegial support, professional discretion, and the clarity of relevant procedures. These conditions may influence whether teachers can act on their professional judgments. Clear

and practicable guidance, access to reliable resources, and opportunities for consultation may enable enactment, whereas unclear policies, inadequate support, or conflicting expectations may constrain it.

This distinction is important because the ability to identify an appropriate decision is not equivalent to the ability to implement it. Institutional support should therefore be examined as a condition of enactment rather than treated merely as a background variable.

Epistemic, pedagogical, ethical, and institutional conditions may interact. For example, a teacher may identify an uncertain religious reference but lack access to a reliable source; the teacher may also face a lesson deadline and unclear school guidance. In such a situation, the decision cannot be adequately explained by subject knowledge or AI competence alone.

The significance of a particular condition may vary according to the task. Access to reliable sources may be especially important when verifying a religious quotation, whereas learner characteristics and curricular objectives may be more prominent when adapting an explanation for a particular age group. These conditions should therefore be examined in relation to specific decisions rather than treated as a fixed hierarchy.

The proposed account is intended to explain teachers' situated judgment and the enactment of decisions involving AI-generated outputs. It does not claim to explain all dimensions of teacher agency, all forms of professional learning, or the full governance of educational AI.

The following boundary propositions specify conditions under which the proposed relationships may vary:

Epistemic discernment may be constrained when reliable sources, relevant subject expertise, or opportunities for consultation are insufficient.

Context-sensitive pedagogical judgment may vary according to the alignment between AI-generated outputs, learning objectives, learner characteristics, and opportunities for adaptation.

Ethical deliberation may be complicated when responsibilities, data-protection requirements, or institutional expectations are unclear or conflicting.

The enactment of professional judgment may be facilitated or constrained by institutional guidance, resources, collegial support, and the scope of professional discretion.

The significance of any single condition may depend on its interaction with other epistemic, pedagogical, ethical, and institutional conditions.

These propositions define an agenda for empirical examination rather than established effects. They also delimit the scope of the proposed model: contextual conditions are relevant insofar as they help explain the formation, justification, or enactment of professional decisions.

Theoretical Contributions

This paper develops a provisional account of ethical-pedagogical agency to clarify the relationship between professional resources, situated judgment, the enactment of decisions, and professional learning in teachers' engagement with GenAI. Its contribution should not be understood as the discovery of an entirely new theory of teacher agency. Rather, it proposes a decision-level analytical specification whose explanatory value requires comparison with existing frameworks.

The first contribution is the distinction between professional resources and their situated mobilisation. AI competence, subject knowledge, pedagogical knowledge, and experience may inform judgment, but their possession alone does not establish how teachers will evaluate a

particular output or justify a decision (Najwa & Hasanah, 2026). This distinction complements competency frameworks by focusing on the reasoning through which professional resources are used in specific situations.

The second contribution is the analytical distinction between judgment and enactment. Teachers may evaluate an output and identify a defensible response but face institutional or material constraints when implementing that decision. Conversely, an action may be undertaken without an adequate professional justification. Examining both judgment and enactment allows researchers to investigate the relationship between teachers' reasoning and the conditions under which their decisions are realised.

The third contribution concerns professional learning. Rather than treating professional learning as a component of agency or a guaranteed cause of responsible AI use, the proposed account treats it as a potential process for reviewing and revising professional judgment. This formulation complements existing research on professional learning and ethical AI integration (Mouta, Torrecilla-Sánchez, et al., 2025) by making the revision of decision-level reasoning an explicit question for further investigation.

The fourth contribution is the contextualization of these relationships within primary Islamic education. Source verification, religious knowledge, pedagogical mediation, and learners' developmental needs provide a relevant domain for examining how epistemic and pedagogical considerations interact. Existing research already recognizes the importance of professional development and source verification in Islamic education (Mat Yusoff et al., 2026; Samirah et al., 2025). The proposed model therefore seeks to specify relationships among these concerns rather than claim that the concerns themselves are new.

Implications for Teacher Professional Development

The proposed account suggests that professional development should provide opportunities for teachers to examine and justify decisions about particular AI-generated outputs, not merely practice using AI tools (Ardani et al., 2025). Authentic cases may involve uncertain religious references, explanations that are unsuitable for learners, potential privacy concerns, or materials whose pedagogical value is unclear.

Teachers could analyze a case, identify the relevant evidence, consider alternative responses, justify a decision, and revisit it after receiving feedback. Such activities may support professional reflection and the revision of judgment, although their effectiveness remains to be established empirically.

Professional learning could address the four analytical dimensions through source-verification exercises, ethical case discussions, lesson-design tasks, and opportunities to articulate the reasoning behind decisions (Nur Hasanah, 2023). Evaluation could combine scenario-based tasks, annotated teaching materials, reflective accounts, and collaborative discussion. Self-reported confidence and participation may provide supplementary information but should not be treated as sufficient evidence of defensible professional judgment.

Implications for School Leadership and Policy

If the enactment of professional judgment depends partly on institutional conditions, responsible AI integration cannot be treated solely as an individual teacher responsibility. Schools may need clear and practicable guidance on source verification, privacy, acceptable AI use, human review, and procedures for handling uncertain or potentially harmful outputs.

In primary Islamic education, institutional guidance may clarify expectations for verifying religious references and identifying when further consultation is appropriate. Such

guidance should support professional judgment rather than presume that every case can be resolved through a uniform rule.

School leaders should also consider access to reliable resources, time for collaborative planning, opportunities for professional learning, and appropriate professional discretion. A teacher who recognizes a problem but lacks the resources or authority to respond may be constrained in enacting a defensible decision. These institutional relationships are proposed as subjects for empirical investigation rather than as effects established by this conceptual paper.

Directions for Empirical Research

Future research should examine whether the proposed dimensions are conceptually distinguishable and recognizable in teachers' professional practice. Qualitative studies using scenario-based interviews, stimulated recall, classroom observations, and analysis of lesson-planning documents could investigate how teachers evaluate outputs and justify decisions.

Longitudinal or design-based studies could examine how professional learning may contribute to the revision of judgment over time. Such studies should investigate changes in reasoning and decision-making rather than assume that participation in professional development necessarily improves practice.

Comparative case studies could examine how school policies, access to reliable sources, leadership practices, collegial support, and professional discretion influence enactment. Quantitative instrument development should follow sufficient conceptual clarification and qualitative examination. Candidate measures would require assessment of content validity, construct validity, reliability, and discriminant validity in relation to AI competence and adjacent constructs.

Mixed methods research may be useful when the research question requires integration of teachers' reported competencies with evidence of their reasoning and decisions. An exploratory sequential design could use qualitative findings to refine the dimensions before developing and testing an instrument. A convergent design could compare survey data with interviews, scenario-based tasks, or documentary evidence. The choice of design should follow the research question and the maturity of the construct.

Limitations

This paper presents a provisional conceptual model rather than an empirically validated theory. Its dimensions and propositions have not been tested against systematic empirical data, and their conceptual boundaries may require revision. Further comparative theoretical analysis is also necessary to establish whether the proposed decision-level account offers explanatory value beyond existing frameworks of teacher agency, AI competence, and professional learning.

The focus on primary Islamic education provides contextual specificity but limits the immediate generalizability of the argument. Relevant standards, educational practices, and institutional conditions may vary across settings. The model also concentrates on professional judgment and its enactment rather than providing a comprehensive account of technical system design, commercial governance, or the wider political economy of educational AI.

Finally, the four proposed dimensions should not be treated as exhaustive, mutually exclusive, or necessarily sequential. Empirical research may indicate that they overlap, require refinement, or should be represented differently. The model's value depends on its capacity to support clearer explanations of teachers' decisions and to withstand comparative and empirical scrutiny.

Taken together, these sources support treating competence as a necessary but not sufficient professional resource, while keeping the proposed agency construct distinct from AI literacy, technological-pedagogical knowledge, and broad ethical principles (Chiu et al., 2024; Miao & Cukurova, 2024; Mishra & Koehler, 2006; Ng et al., 2021; Shulman, 1986).

The contextual emphasis is consistent with work showing that professional agency is formed within changing professional environments and that professional learning depends on social participation and sustained opportunities to interpret practice (Eteläpelto et al., 2013; Vähäsantanen, 2015; Wenger, 1998).

The proposed dimensions also respond to documented educational concerns about accuracy, fairness, privacy, and teacher oversight in AI-supported learning (Crompton & Burke, 2023; Holmes et al., 2022; Jobin et al., 2019; OECD, 2023; UNESCO, 2021).

Conclusion

This paper has developed a provisional theoretical account of ethical-pedagogical agency to examine how teachers engage with generative artificial intelligence (GenAI) in primary Islamic education. Its starting point is the distinction between professional resources, the situated exercise of professional judgment, and the enactment of decisions. AI competence, subject knowledge, pedagogical knowledge, and professional experience may inform teachers' judgments, but their possession alone does not establish how those resources will be mobilised in particular instructional situations or whether the resulting decisions can be enacted under prevailing conditions.

Ethical-pedagogical agency is conceptualised as the situated exercise of professional judgment through which teachers mobilise relevant knowledge, competencies, values, and experience to evaluate and respond to AI-generated outputs. Four provisional analytical dimensions are proposed: epistemic discernment, ethical deliberation, context-sensitive pedagogical judgment, and accountable professional justification. These dimensions provide a structure for examining how teachers assess information, consider ethical responsibilities, evaluate educational suitability, and explain the reasons for their decisions. They are not assumed to constitute a fixed sequence or an empirically validated measurement structure.

The paper also distinguishes professional judgment from the enactment of professional decisions. Teachers may decide to verify, adapt, use, defer, or reject AI-generated content, but their ability to implement a decision may depend on access to reliable sources, learner and curriculum requirements, institutional guidance, professional discretion, and available resources. Professional learning is positioned as a potential developmental process through which teachers may examine and revise their judgments through reflection, collaboration, feedback, and review of practice. Neither the development of judgment nor its enactment is assumed to follow automatically from participation in professional learning or the possession of AI competencies.

The proposed account is intended to complement existing research on AI competence, ecological teacher agency, professional learning for ethical AI integration, and AI in Islamic education. Its potential contribution lies in specifying relationships among professional resources, decision-level judgment, the enactment of decisions, and contextual conditions. The context of primary Islamic education provides a relevant setting for examining these relationships because decisions about AI-generated religious content may involve source verification, pedagogical mediation, learner needs, and professional responsibility. These

considerations are context-sensitive and should not be assumed to operate identically across institutions.

The model remains provisional. Further research is required to determine whether its dimensions are conceptually distinguishable, whether they can be identified in teachers' professional practices, and whether the proposed relationships provide explanatory value beyond existing frameworks. Qualitative studies of teachers' reasoning, longitudinal investigations of professional learning, comparative case studies, and appropriately designed mixed methods research could contribute to this assessment. Such research should examine not only what decisions teachers make, but also the reasoning, evidence, constraints, and opportunities that shape those decisions.

Ultimately, the responsible integration of GenAI in primary Islamic education cannot be understood solely through the competencies teachers possess or the technologies they use. It also requires examining how professional resources are mobilised in context-sensitive judgment, how decisions are justified and enacted, and how those judgments may be reviewed through professional learning. By offering a provisional analytical account of these relationships, this paper establishes a basis for further theoretical scrutiny and empirical investigation without presuming that the proposed model has already been validated.

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Conflict of Interests

The author declares no conflict of interest.

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