

AI Governance Vacuum in Indonesian Islamic Higher Education: Structural Drivers and Epistemic Consequences

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ABSTRACT

Indonesian Islamic higher education institutions (*Perguruan Tinggi Keagamaan Islam*, PTKI) are absorbing generative AI into academic practice while operating without any institution-wide governance framework to regulate its use. This article investigates why institutional-level AI governance has failed to materialise across more than 800 PTKI, and what the epistemic consequences of that failure are. Drawing on a Critical Integrative Review of 45 sources across AI governance, Islamic epistemology, and Indonesian education policy, the review identifies three plausible mutually reinforcing structural drivers: the jurisdictional separation between the Ministry of Religious Affairs and the national AI policy architecture; the unresolved tension between AI's probabilistic epistemology and the *sanad*- and *ijazah*-grounded Islamic knowledge tradition, which induces normative paralysis in institutional leadership; and the complete absence of binding AI regulation from the responsible ministry. Together, these factors produce a self-sustaining collective action failure in which no institutional actor exercises governance initiative. The analytical consequences appear severe: *ulama* authority in Islamic knowledge production faces structural erosion, the legitimacy of PTKI scholarly output is placed in question, and Indonesia is displaced from the global conversation in which Islamic universities elsewhere are actively constructing Islamic AI ethics frameworks. The article proposes a governance framework grounded in *maslahah*, *amanah*, *'adl*, and *'ilm*, and introduces the Three-Dimensional Governance Gap Framework as a transferable analytical instrument for AI governance studies in Islamic higher education across Muslim-majority contexts.

Keywords: AI governance vacuum; Indonesian Islamic higher education; Islamic epistemology; ulama authority



Introduction

Somewhere in Indonesia today, a student at an Islamic university is drafting her thesis on fiqh al-mu'amalat using a generative AI tool. At another institution, a lecturer is compiling teaching materials on hadith methodology with AI assistance. Neither has received formal guidance on what is permissible. No university-wide policy governs their choices. No institutional framework defines the epistemic boundaries of AI's role in their scholarly practice.

This situation is not an isolated anomaly confined to underfunded institutions in remote provinces. It is the systemic condition of Islamic higher education in Indonesia as a whole. Across more than 800 Perguruan Tinggi Keagamaan Islam (PTKI), generative AI has been absorbed into everyday academic practice without institutional level governance to regulate, delimit, or guide it. Every policy document retrieved in this review operates at the faculty or study programme level. Such documents lack institution-wide binding force and are absent from official repositories in the majority of retrievable cases.

Whether this reflects the genuine non existence of governance policies or a systemic failure to make existing policies publicly accessible is analytically immaterial. A policy that cannot be accessed cannot be implemented, enforced, or evaluated. In either case, the outcome is a governance vacuum, and a consequential one (Ghimire & Edwards, 2024; UNESCO, 2021).

The paradox at the heart of this vacuum is not difficult to state, but it is difficult to dismiss. AI has been accepted de facto as a tool of academic practice: students use it, lecturers tolerate it, and institutions have not moved to restrict it. Yet AI has been simultaneously ignored as an object of institutional regulation. The technology is present; the governance is not. What elevates this beyond a routine administrative shortfall is the specific nature of PTKI as institutions.

These are not general purpose universities where AI governance is primarily a question of academic integrity protocols and data management. They are institutions whose foundational purpose is the transmission, production, and validation of Islamic knowledge. It is precisely that knowledge tradition that ungoverned AI adoption places under pressure (Jobin et al., 2019; UNESCO, 2021).

The international higher education landscape offers a clarifying contrast. Over the past three years, universities such as MIT, the University of Edinburgh, and Princeton have developed comprehensive, publicly accessible, and regularly updated AI governance frameworks. These cover academic integrity, research ethics, data governance, and responsible use. In Southeast Asia, Universiti Malaya has begun developing AI guidelines that acknowledge both global standards and local institutional contexts. Azevedo et al. document the accelerating emergence of institutional AI policies across multiple jurisdictions (Azevedo et al., 2025). Filgueiras observes that the central challenge has shifted from whether

universities should govern AI to whether their governance structures can keep pace with adoption (Filgueiras, 2024).

Wu et al. and Weuts et al. further demonstrate that governance frameworks in leading institutions are no longer reactive documents responding to crisis (Wu et al., 2024; Weuts et al., 2025). They have become proactive instruments embedding AI ethics into the institutional fabric of academic life. Against this backdrop, the near-total absence of institutional-level AI governance in Indonesian PTKI is not simply a gap to be closed through administrative catch-up. It is a pattern that demands explanation on its own terms.

Part of that explanation lies in three features that distinguish PTKI from the secular institutions dominating the AI governance literature. These features do not merely compound one another additively. They interact to produce a governance challenge that is qualitatively distinct. The first is jurisdictional. PTKI operates under the Ministry of Religious Affairs (Kementerian Agama, Kemenag) rather than the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek), which anchors the national AI policy agenda. This structural separation systematically excludes PTKI from the regulatory pressures and policy frameworks that apply to other Indonesian universities (Wadipalapa et al., 2024; Musgamy et al., 2024).

The second feature is epistemological. PTKI inherits and is constituted by a knowledge tradition grounded in revealed sources (*naql*), disciplined reason (*'aql*), and the validation authority of ulama. In this tradition, knowledge claims are authenticated through recognised scholarly chains of transmission (*sanad*) and teaching authority (*ijazah*), not merely by empirical adequacy. Generative AI produces outputs through probabilistic pattern-matching across large-scale corpora. It operates without *sanad* or *ijazah*. This renders it an epistemologically foreign mode of knowledge production that frameworks designed for secular empiricist institutions cannot adequately govern (Zacky & Moniruzzaman, 2024).

The third feature is institutional mission. PTKI carries an explicit mandate to sustain Islamic epistemic authority and to produce graduates capable of upholding the Islamic scholarly tradition. This mission is not incidental to the governance challenge. It is precisely what renders the governance vacuum consequential far beyond the administrative domain (Musgamy et al., 2024).

Existing scholarship on AI in PTKI has productively documented adoption patterns, stakeholder perceptions, and integration challenges (Achruh et al., 2024; Alhajj et al., 2024; Ansori et al., 2024). It has also valuably examined the ethical dimensions of AI use through an Islamic normative lens (Nilamsari et al., 2025; Aflahah et al., 2025). However, none of these contributions takes the absence of institutional governance as its primary object of inquiry. Studying why governance has not emerged requires a different analytical frame than studying how

institutions are managing AI adoption. The former presupposes failure; the latter presupposes, at minimum, effort.

This article occupies that unaddressed position. It asks not how PTKI can improve their AI governance, but why institutional-level governance has systematically failed to materialise. It further asks what the epistemic consequences of that failure are for the Islamic knowledge institutions in which it is occurring. The article draws on three disciplinary streams: AI governance, Islamic epistemology, and Indonesian education policy. It employs a Critical Integrative Review methodology suited to synthesising heterogeneous literature around an object whose most significant empirical feature is its absence. Two questions that existing literature has left unanswered are addressed: why no institution-wide AI governance policy is identifiable across Indonesian PTKI, and what the epistemic consequences of this vacuum are for Islamic knowledge authority (Azevedo et al., 2025; Filgueiras, 2024; Achruh et al., 2024).

Four research questions structure the inquiry, moving deliberately from the descriptive to the normative. The first maps the state of AI governance in PTKI and characterises the partial measures that exist in its place. The second analyses the structural factors, institutional, epistemic, and regulatory, that account for the persistent absence of comprehensive governance. The third examines how the governance vacuum interacts with, and potentially erodes, the epistemic authority structures that define PTKI as Islamic knowledge institutions. The fourth develops Islamic-value-based principles and structural recommendations for contextually appropriate AI governance frameworks.

The article proceeds as follows. The remainder of this section develops the theoretical framework integrating AI governance theory, Islamic epistemology, and the conceptual distinction between a policy gap and a governance vacuum. This framework, the Three-Dimensional Governance Gap Framework, anchors the analysis throughout. Section 2 presents the Critical Integrative Review methodology and its justification. Section 3 reports results and discussion across four sub-sections corresponding to the four research questions. Section 4 draws conclusions, articulates theoretical contributions, and proposes a future research agenda.

Research Method

The methodology underpinning this article is a Critical Integrative Review (CIR). It was selected on the basis of three convergent justifications that together distinguish it from available alternatives. The first justification is the disciplinary heterogeneity of the relevant literature. The sources necessary to address the research questions are dispersed across Islamic studies, AI governance, and Indonesian education policy. These three fields differ sufficiently in their

epistemological conventions, publication venues, and evaluative standards that they cannot be meaningfully combined through a conventional Systematic Literature Review (SLR). SLR is designed for homogeneous empirical corpora and is therefore unsuited to this task.

The second justification concerns the nature of the research object itself. Studying the absence of institutional governance requires a methodology capable of treating absence as substantive analytical data. This is a methodological affordance that CIR shares with qualitative document analysis (Bowen, 2009). Neither SLR nor meta-analysis provides this affordance; both are designed to synthesise what exists in a body of literature, not to interrogate and theorise what does not (Torraco, 2005; Whittemore & Knafl, 2005). CIR is further distinguished from narrative review by its more structured search strategy, its explicit analytical framework, and its systematic evaluation of sources against defined inclusion and exclusion criteria (Torraco, 2005).

The third justification is the article's intended output. Producing a normative governance framework and contextually grounded policy recommendations is consistent with the integrative review form. This form explicitly accommodates theory development alongside empirical synthesis. Meta-analysis, by contrast, is restricted to quantitative aggregation across comparable studies and is therefore incompatible with this article's aims (Torraco, 2005).

The literature search was conducted across four source types. These were Scopus and Google Scholar for peer-reviewed academic literature; SINTA, Indonesia's national academic database, for Indonesian-language and locally published scholarship; and a targeted grey literature search directed at publicly available PTKI policy documents, institutional regulations, academic guidelines, and programme roadmaps. The search period was set at 2019 to 2025, with deliberate emphasis on the 2022 to 2025 window corresponding to the post-ChatGPT era of generative AI adoption. Two canonical works in Islamic epistemology by Al-Attas are included outside this window as foundational references (Al-Attas, 1978; Al-Attas, 1995). Their relevance is justified by their constitutive status within the field rather than their temporal proximity to the phenomenon under study.

Inclusion criteria encompassed four categories of sources. These were: empirical and conceptual studies on AI in Islamic higher education in Indonesian and comparative international contexts; AI governance and institutional policy studies in higher education broadly; contemporary Islamic epistemology scholarship engaging with digital or technological contexts; and publicly available official PTKI policy documents of any institutional level. Exclusion criteria removed studies restricted to K-12 or non-university Islamic education, AI studies with no governance or policy dimension, and non-peer-reviewed commentary lacking

substantive empirical or theoretical content. The final corpus comprises 45 sources: 39 substantive academic references, three methodology references, and three institutional PTKI documents. The scarcity of retrievable institutional-level policy documents is not treated as a sampling limitation. It is an empirical finding in its own right, interpreted here as a manifestation of the governance vacuum under analysis.

The analytical procedure proceeded in three stages. First, all sources were mapped into thematic clusters corresponding to the article's disciplinary streams: global AI governance, AI in Indonesian PTKI, PTKI institutional governance and education policy, and Islamic epistemology with comparative references. Second, each cluster was subjected to contrastive reading, that is, critical and comparative engagement directed at identifying patterns, contradictions, and cross-cluster gaps. Sources within each cluster were coded independently by both authors, with disagreements resolved through iterative discussion until consensus was reached. This procedure strengthens the credibility of the thematic synthesis. Third, findings across clusters were synthesised using the Three-Dimensional Governance Gap Framework developed in the preceding section, ensuring analytical consistency across the Results and Discussion.

Two credibility considerations warrant explicit acknowledgement. The primary limitation is the non retrievability of institutional-level PTKI policy documents through systematic search of public repositories. This condition admits two interpretations: that such documents do not exist, or that they exist but are not publicly accessible. This article holds both as analytically equivalent instances of governance failure, rather than claiming to resolve the distribution between them empirically. Future research using direct institutional surveys or formal information-access requests would be required to determine which condition predominates across the more than 800 PTKI institutions constituting the population of concern.

The findings of this review are accordingly analytical and interpretive in character. Their generalisation across that population awaits empirical validation through survey or case-study methods. The article adopts an insider-critical epistemic stance, one that respects the Islamic scholarly traditions that give PTKI its institutional identity while subjecting those institutions to sustained critical scrutiny in the context of accelerating digital transformation. All causal and evaluative claims in the Results and Discussion should therefore be read as analytically grounded propositions requiring empirical validation, not as established findings.

Results and Discussion

Mapping AI Governance in Indonesian PTKI: What Exists and What Does Not

The most consequential finding of this review is also its most precise. No institution wide AI governance policy at the level of the rector, the academic senate, or any equivalent university-wide authority was identifiable through systematic document retrieval across Indonesian PTKI. Every document located operates below the threshold of institutional governance. This is not a finding about poor policy quality or uneven implementation. It is a finding about the structural non-existence, or at minimum the structural inaccessibility, of governance itself.

Three documents were retrieved and examined. The Pedoman Penulisan Skripsi issued by the Faculty of Da'wah and Communication at UIN Sunan Kalijaga in 2025 mentions AI only tangentially within broader academic integrity provisions. It is not a governance framework. The Pedoman Etika Penggunaan AI dalam Kegiatan Akademik from the Faculty of Syariah at UIN Antasari in 2025 is more substantive, but it binds only its own faculty. It cannot be read as the institutional position of UIN Antasari as a whole. The Roadmap Pengabdian kepada Masyarakat of the Informatics Study Programme at UIN Sunan Kalijaga predates the generative AI era entirely and contains no relevant governance provisions (Kalijaga, 2025; Sholihin & Mubarak, 2025; Yogyakarta, 2021).

None of these documents, individually or in aggregate, constitutes an institutional AI governance framework. Leading global universities have developed comprehensive, publicly accessible, and regularly reviewed AI policies that now function as a baseline institutional expectation rather than a mark of distinction. The contrast with Indonesian PTKI is not background context. It is structurally diagnostic (Wu et al., 2024; Weuts et al., 2025; Chan, 2023).

Two interpretations of this absence are analytically possible, and this article holds both simultaneously. The first is straightforward: no institution-wide policy has been formulated, and the vacuum reflects genuine non existence. The second is that policies may exist in some institutions but have not been made publicly accessible, whether through deliberate confidentiality, limited communication capacity, or institutional inertia. Determining which interpretation predominates across more than 800 PTKI institutions requires direct institutional surveys or formal information-access requests. Both fall outside the scope of this review.

What can be resolved here is that both interpretations represent a governance failure of equivalent severity. A policy inaccessible to students, lecturers, and external stakeholders cannot be implemented, enforced, or evaluated. Public accessibility is not incidental to governance; it is constitutive of it as a functional social practice (UNESCO, 2023; Al-Laith & Arabeyyat, 2026). The

governance vacuum therefore holds whether its basis is the absence of policy or the absence of disclosure.

Acknowledging the vacuum does not require treating the institutional landscape as uniformly inert. Partial responses have emerged, and their careful characterisation matters. They are too frequently mistaken for governance proper. This article identifies three observable response patterns across PTKI. The first is soft prohibition: programmes or individual lecturers ban AI use in assignments without offering responsible use alternatives. This is reactive closure. It forecloses AI without producing the institutional position that would make such foreclosure coherent or consistently enforceable.

The second pattern, and by far the most prevalent, is informal tolerance. AI is widely used, tacitly accepted, and institutionally unacknowledged. This condition is documented across PTKI contexts where students and lecturers navigate AI use through individual judgment in the absence of any institutional guidance (Safwandi et al., 2025). There is no policy of prohibition and no policy of permission. There is simply the absence of any institutional position whatsoever. This is the governance vacuum in its most visible and most consequential form.

The third pattern is ad hoc guidance, represented by the documents retrieved in this study. These are partial, faculty-level documents that are uncoordinated across institutional units, carry no enforcement mechanism, and undergo no systematic review. They reflect genuine local effort. However, their sub-institutional character means they cannot substitute for the coherent university-wide framework that governance requires (Azevedo et al., 2025; Filgueiras, 2024; Batool et al., 2024). Table 1 presents this typology.

Table 1. *Typology of Partial AI Governance Responses in Indonesian PTKI*

Type	Description	Characteristic	Example
A – Soft Prohibition	AI banned in assignments without responsible-use alternatives	Reactive; no positive policy	Individual lecturer-level prohibitions; not institutionally formalised
B – Informal Tolerance	AI widely used but institutionally unacknowledged; no policy issued	Default condition across most PTKI	Majority of PTKI across Indonesia
C – Ad Hoc Guidance	Partial faculty or programme-level guidance; uncoordinated; no enforcement or review	Fragmented; non-binding	UIN Antasari (FSyariah); UIN Sunan Kalijaga (FDK, Prodi Informatika)

Sources: Azevedo et al. (2025); Filgueiras (2024); Batool et al. (2024)

The table content requires no revision. The accompanying prose, however, needs adjustment. Here is the revised version:

Positioned within a comparative frame, the governance status of Indonesian PTKI does not simply lag behind the global frontier. It occupies a categorically different tier. Among Islamic higher education institutions globally, the picture is more varied but directionally clear. Value-based AI frameworks have begun to emerge in Saudi Arabia, the UAE, and Malaysia, anchored in national-level initiatives and beginning to filter into institutional practice (Gorian & Osman, 2024; Wu et al., 2024).

Indonesian general higher education institutions offer a closer but still instructive comparison. Their AI governance remains partial and uncoordinated. However, academic integrity guidelines have at least begun to accommodate AI-specific provisions at the faculty level. National policy attention to AI in education has generated some institutional momentum (Wadipalapa et al., 2024; Walhidayah & Surendro, 2025). Indonesian PTKI has not yet reached this threshold. It has not entered the governance development trajectory that other Indonesian universities, operating under a different ministerial jurisdiction, are navigating with varying degrees of success.

This comparison is not offered to embarrass but to specify. The governance gap is not a matter of pace. It is a matter of structural position. PTKI has not yet entered the field in which governance is being actively contested and constructed. Table 2 renders this comparative picture across four institution types.

Table 2. *Comparative AI Governance Status Across HEI Types*

Institution Type	AI Policy Status	Governance Level
Global Secular HEIs (MIT, Edinburgh, Princeton)	Comprehensive policies, updated regularly	Institutional
Global Islamic HEIs (Saudi Arabia, UAE, Malaysia)	Islamic-value-based AI frameworks beginning to emerge	National / Institutional
Indonesian General HEIs	Academic integrity guidelines beginning to accommodate AI; partial and uncoordinated	Faculty / Programme
Indonesian PTKI (UIN, IAIN, STAIN, 800+ institutions)	Near-total absence at institutional level; only partial Type A/B/C responses	Absent / Partial

Sources: Gorian & Osman (2024); ICESCO & SDAIA (2024); Wu et al. (2024); Weuts et al. (2025); Wadipalapa et al. (2024); Walhidayah & Surendro (2025)

Structural Drivers of the Governance Vacuum

The governance vacuum documented in the preceding section does not exist by accident. It is produced and sustained by three structural factors that operate simultaneously and reinforce one another. The first is a jurisdictional arrangement that excludes PTKI from the national policy landscape. The second is an unresolved epistemic tension that paralyses institutional initiative from within. The third is a regulatory silence from above that removes the external pressure that might otherwise compel action. Understanding why no institutional AI governance policy has emerged requires examining each factor on its own terms before accounting for how they interact.

The first and most immediate factor is jurisdictional. PTKI operates under the authority of the Ministry of Religious Affairs (Kementerian Agama, Kemenag). Indonesia's national AI policy architecture, including instruments emerging from the National AI Strategy, is anchored in the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) and the National Research and Innovation Agency (BRIN). This ministerial separation is not a technical administrative detail. It means that PTKI is structurally excluded from the regulatory frameworks, policy incentives, and accountability mechanisms that apply to other Indonesian higher education institutions (Wadipalapa et al., 2024; Musgamy et al., 2024). When national AI policy conversations happen, PTKI is not in the room, not because it has been deliberately excluded, but because Indonesian education governance was never designed with this overlap in mind.

Compounding the jurisdictional problem is a severe institutional capacity gap. Technology-literate human resources are unevenly distributed across PTKI. Smaller institutions, particularly STAIN and IAIN outside Java, face significant deficits in both digital infrastructure and the specialised expertise required to design, implement, and evaluate AI governance frameworks. Few institutions possess dedicated units for digital policy or technology governance (Achruh et al., 2024; Alhajj et al., 2024). The consequence is a double bind: even PTKI that recognise the need for AI governance lack the institutional template to draw from, the regulatory reference point to anchor policy to, and the external accountability pressure that might turn recognition into action.

The second structural factor operates at the level of epistemology rather than administration. AI systems, particularly large language models, produce outputs through probabilistic pattern-matching across vast corpora of text. This is epistemologically incommensurable with the Islamic knowledge tradition. In that tradition, the authority of a claim derives not from statistical inference but from its chain of transmission (*sanad*), the scholarly credentials of its transmitters (*ijazah*), and the deliberative consensus of qualified ulama. For PTKI, this is not an abstract philosophical concern. It bears directly on what kind of knowledge AI can

legitimately produce within an Islamic scholarly context, and therefore on what kind of AI use can be institutionally sanctioned (Zacky & Moniruzzaman, 2024; Mukmin Hakim & Shamsuddin, 2024).

This tension has reached the highest levels of Islamic scholarly deliberation in Indonesia. The Nahdlatul Ulama Mukhtar of 2023 addressed the question of AI use directly. This was a significant signal that the normative stakes of AI adoption are recognised within Indonesia's largest Islamic organisation. Yet the Mukhtar did not produce actionable policy consensus (Nilamsari et al., 2025; Aflahah et al., 2025). The scholarly deliberation is ongoing, and its outcome remains open. For PTKI leadership, this creates a condition that may be characterised as normative paralysis. Institutions genuinely committed to Islamic values find themselves unable to endorse an AI governance framework that has not been validated by Islamic scholarly consensus, yet that consensus has not arrived (Mainuddin et al., 2025; Abror et al., 2024). The result is institutional waiting: principled in motivation, but consequential in effect.

The third structural factor is regulatory. Indonesia's existing AI policy instruments are primarily sectoral in orientation, directed at the digital economy, creative industries, and public administration. None specifically addresses Islamic higher education. More critically, Kemenag, the ministry with direct authority over PTKI, has issued no binding AI regulation, guidance document, or policy directive for the institutions under its jurisdiction (Wadipalapa et al., 2024; Walhidayah & Surendro, 2025). This regulatory silence from above is not neutral. It removes the external accountability pressure that, in other higher education contexts, has been a primary driver of institutional policy development. Without a ministerial mandate to comply with, PTKI leadership has little institutional incentive to initiate a governance process that is administratively demanding, epistemically contested, and unrewarded by any external evaluative framework.

Taken individually, each of these three factors would constitute a significant obstacle to governance development. Taken together, they form something more troubling: a self-sustaining cycle in which the absence of governance reproduces itself through the interaction of its own structural conditions. The jurisdictional dualism between Kemenag and Kemendikbudristek means no single regulatory authority takes responsibility for PTKI AI governance, removing external pressure from above. The unresolved epistemic tension means PTKI leadership defers to an Islamic normative consensus that has not yet materialised, removing internal initiative from within. The absence of national regulation means no external accountability compels PTKI to act in the interim.

Each institutional actor, the ministry, the university leadership, and the scholarly community, waits for another to move first. The result is the governance equivalent of a collective action failure. Inaction becomes individually rational for

every actor while remaining collectively catastrophic for the institution as a whole. Figure 1 illustrates these interlocking dynamics and their mutually reinforcing character.

Epistemic Consequences: What Is at Stake

The governance vacuum documented in the preceding sections is not an administrative problem with administrative consequences. Its most significant effects are epistemic. They concern the integrity, legitimacy, and future trajectory of Islamic knowledge production itself. Understanding what is at stake requires moving beyond the question of whether PTKI has adequate policies. It requires asking what happens to Islamic scholarly authority when the institutions charged with sustaining it have no framework governing AI's role within it.

The most immediate consequence concerns the authority of ulama in knowledge production. AI systems now enable any user, whether student, researcher, or layperson, to obtain what presents itself as an Islamic answer. These are generated fatwas, tafsir, and academic Islamic scholarship produced without ulama verification and without sanad. This is not a marginal or hypothetical phenomenon. It is already occurring within PTKI academic practice, in the absence of any institutional framework that defines what AI-generated Islamic content is, what it is not, and under what conditions its use constitutes legitimate scholarly practice (Pabbajah et al., 2024; Jaidi et al., 2025; Abror et al., 2024).

The gravity of this situation becomes clear when the function of ulama authority is properly understood. The Islamic scholarly tradition has sustained itself across more than a millennium not through the accumulation of texts alone, but through a living quality-control mechanism. This mechanism comprises the chain of transmission that authenticates knowledge, the scholarly credentials that authorise interpretation, and the deliberative community that evaluates claims against revealed foundations. AI disrupts this mechanism not by producing obviously wrong outputs, but by producing outputs that are plausible, fluent, and formally indistinguishable from scholarly work. These outputs are nonetheless entirely detached from the authenticating structures that give Islamic knowledge its epistemic warrant (Zacky & Moniruzzaman, 2024; Nilamsari et al., 2025). Without governance, PTKI lacks the institutional instruments necessary to define, delimit, and enforce the boundaries of AI's role in Islamic scholarly processes. The quality-control mechanism erodes by default.

The second order of consequence concerns the legitimacy of PTKI knowledge output as a category. Theses, research articles, and institutional scholarly products are increasingly produced with AI assistance. Where no Islamic epistemological framework governs that use, the epistemic legitimacy of those outputs becomes open to challenge. This challenge arises not only from external critics but from within the Islamic scholarly community itself. A thesis on fiqh produced partly by a

system that operates without sanad or ijazah occupies an undefined space in the Islamic knowledge tradition: not clearly legitimate, not clearly prohibited, simply ungoverned (Zacky & Moniruzzaman, 2024; Ansori et al., 2024).

This ambiguity carries a deeper institutional risk. What distinguishes PTKI scholarly output from that of secular Indonesian universities if no distinctively Islamic value framework governs AI use in either? The comparative epistemic advantage that has historically justified PTKI's separate institutional existence is its grounding in Islamic epistemological principles that secular institutions neither share nor claim. That advantage is quietly eroded when AI use within PTKI proceeds on the same unregulated terms as AI use anywhere else. This is not merely a technical or administrative problem. It is an institutional identity crisis, one that strikes at the question of what PTKI is for.

The third consequence is geopolitical and strategic in character. Indonesia is the world's largest Muslim-majority country. Its Islamic higher education system, comprising more than 800 PTKI, is among the most extensive in the Muslim world. Yet in the emerging global conversation about how Islamic values should inform the ethics and governance of AI, Indonesia's PTKI is conspicuously absent. Saudi Arabia and the United Arab Emirates have moved to integrate Islamic values into national AI ethics frameworks, constructing what Gorian and Osman characterise as a distinctive Islamic AI ethics paradigm at the level of state policy (Gorian and Osman, 2024). Malaysia, through the Malaysia Digital Economy Corporation and emerging Islamic university frameworks, is developing Islamic-value-based AI governance with increasing institutional coherence (ICESCO & SDAIA, 2024). Indonesian PTKI is not only behind secular Indonesian universities in governance development. It is behind Islamic universities in other Muslim-majority countries that are actively constructing the frameworks within which global Islamic AI ethics will be defined (Wadipalapa et al., 2024; Walhidayah & Surendro, 2025). This is not technical lag. It is epistemic and strategic displacement from a conversation that Indonesia, by any measure of scale and scholarly tradition, should be leading.

The deepest consequence is also the least visible, precisely because it operates through inaction rather than action. The absence of AI governance policy in PTKI is not institutional neutrality. It is a choice, whether active in the sense of deliberate regulatory avoidance, or passive in the sense of neglected urgency. It carries compounding epistemic consequences that accumulate with every semester that passes ungoverned. By allowing the vacuum to persist, PTKI institutions do not preserve a neutral space. They cede the definition of AI's role in Islamic scholarly practice to three forces that are indifferent to Islamic epistemic values. The first is unregulated user practice shaped by convenience rather than principle. The second is technology market logic optimised for engagement rather than truth, a dynamic Williamson identifies as characteristic of platform markets

increasingly shaping higher education policy from outside institutional boundaries (Williamson, 2019). The third is AI platform content policies written for global secular audiences with no reference to sanad, ijazah, or maqasid al-shari'ah.

The question this analysis ultimately raises is not procedural but foundational. Will PTKI allow the future of Islamic epistemology, the criteria by which Islamic knowledge is produced, authenticated, and transmitted, to be shaped by the logic of technology markets? Or will it reclaim the institutional authority to define that future on its own terms? This is, at its core, a question of epistemic sovereignty in the AI era. The governance vacuum, left unaddressed, answers that question by default in favour of the market.

Toward an Islamic-Value-Based AI Governance Framework for PTKI

The analysis presented in preceding sections converges on a single imperative. The governance vacuum in Indonesian PTKI must be addressed through frameworks constructed from within the Islamic tradition. These frameworks must not be imported wholesale from secular governance contexts. Global instruments offer structurally useful templates (UNESCO, 2021; OECD, 2020; Floridi & Cowls, 2019). They identify the domains any governance framework must cover and the procedural standards that make policy enforceable.

However, these instruments operate from secular-empiricist epistemological assumptions. Those assumptions are incommensurable with the knowledge tradition PTKI is mandated to sustain. Floridi acknowledges that AI ethics frameworks are not epistemologically neutral (Floridi, 2023). Their principles carry embedded assumptions about rationality, knowledge, and institutional accountability. These assumptions do not translate uniformly across different cultural and normative contexts (Floridi, 2023).

Adopting global frameworks without critical integration would reproduce a specific problem. It would replicate, at the governance level, the epistemic displacement the governance vacuum has already allowed by default. The appropriate starting point is therefore not a policy template. It is a set of values. Four principles from the Islamic intellectual tradition provide the foundational architecture for PTKI AI governance.

These four principles offer an epistemically coherent and operationally viable framework. Their selection over the full maqasid al-shari'ah framework requires justification. The full maqasid framework typically enumerates five or six objectives: nafs, 'aql, nasl, mal, din, and in some formulations 'ird. Several works in the cited literature deploy maqasid al-shari'ah as the primary normative lens (Mohadi & Tarshany, 2023; Nilamsari et al., 2025; Mustapha & Malkan, 2025). This article does not reject that approach.

Rather, it argues that the four selected values operate as governance-proximate principles. Each maps directly onto an institutional policy domain.

These domains are risk assessment, accountability, equity, and epistemic integrity. The full maqasid framework was designed for jurisprudential adjudication, not institutional governance design. It does not foreground these domains as governance instruments in the same way.

Maslahah subsumes the welfare objectives of maqasid. 'Ilm operationalises hifz al-'aql and hifz al-din in the specific context of knowledge production. 'Adl and amanah address institutional accountability and equity dimensions. The maqasid taxonomy does not foreground these as governance instruments. Future research developing a full maqasid-grounded governance model would provide a complementary and more jurisprudentially complete alternative.

The first principle is maslahah, or public interest. It requires that AI use be evaluated by its capacity to maximise benefit and minimise harm across all stakeholders. This is operationalised through risk assessment protocols and use policies. Those policies must address learning outcomes, bias prevention, and disinformation mitigation. Maslahah thus establishes the welfare foundation of the entire framework.

The second principle is amanah, or accountability. It locates responsibility for the consequences of AI use at the institutional level. Responsibility does not rest merely with individual lecturers or students. Amanah demands mandatory disclosure and reporting mechanisms. These mechanisms make institutional accountability visible and enforceable.

The third principle is 'adl, or justice. It requires equitable access to AI tools across students and institutions. It also requires equitable treatment of AI-assisted outputs in assessment. Current digital infrastructure disparities ensure that AI adoption widens the quality gap between well-resourced and under resourced PTKI. Policy must therefore direct investment toward closing this infrastructure divide.

The fourth principle is 'ilm, or knowledge integrity. It holds that AI must not substitute for legitimate Islamic knowledge validation processes. Sanad and ijazah remain non negotiable epistemological standards in Islamic scholarly practice (Nilamsari et al., 2025; Aflahah et al., 2025; Mohadi & Tarshany, 2023; Mustapha & Malkan, 2025; Akhter et al., 2024). AI may assist in scholarship, but it cannot replace the authority those standards confer. Table 3 maps these four values to specific governance principles and their operational policy components.

Table 3. *Islamic Principles as the Foundation of an AI Governance Framework for PTKI*

Islamic Value	Governance Principle	Operational Policy Component	Illustrative Operational Indicators
<i>Maslahah</i> (Public Interest)	Maximise benefits, minimise harms	Risk assessment protocol; AI use policy	1. Mandatory AI impact checklist per course; 2. % of study programmes with documented AI use policy
<i>Amanah</i> (Accountability)	Institutional accountability	Disclosure reporting mechanisms &	1. Mandatory AI disclosure statement in thesis; 2. Annual institutional AI use report to Kemenag
<i>'Adl</i> (Justice)	Equitable access	Equity of access policy; infrastructure investment	1. AI tool access parity index across PTKI tiers; 2. Minimum bandwidth/device standard per student
<i>'Ilm</i> (Knowledge Integrity)	Knowledge integrity	Academic integrity policy; AI-ulama collaboration	1. Defined ulama review requirement for AI-assisted Islamic scholarship; 2. Sanad documentation protocol for AI-assisted fatwa research

These indicators are illustrative rather than prescriptive; their adaptation to specific institutional contexts is a necessary step in implementing the framework as a transferable instrument

Sources: Nilamsari et al. (2025); Aflahah et al. (2025); Fouz Mohamed Zacky & Moniruzzaman (2024); Mohadi & Tarshany (2023); Mustapha & Malkan (2025); Akhter et al. (2024)

These four principles generate a framework operationalised across three governance domains. The first domain is learning and assessment. Every governance framework must define, with specificity, what AI use is permitted and prohibited in assessed academic work. It must establish disclosure requirements that make AI use visible rather than concealed. It must also develop AI literacy as a formal learning outcome, not an incidental byproduct of unreflective adoption (Azevedo et al., 2025; Stix, 2021).

The second domain is research and publication. AI disclosure requirements must align with standards emerging across international journals, including Nature and Elsevier (Jobin et al., 2019; Díaz-Rodríguez et al., 2023; OECD, 2023). These requirements must simultaneously address the distinctive demands of Islamic scholarly research. A critical boundary exists between legitimate AI assistance in literature review and the substitution of AI outputs for ulama

interpretive authority. Islamic scholarship reserves that authority for qualified scholars alone.

The third domain is academic administration. AI use in institutional communications, student advisory services, and administrative decision-making requires its own governance provisions. The absence of policy in these areas creates accountability gaps. These gaps compound the existing vacuum in academic governance (UNESCO, 2021; UNESCO, 2023). Governance across all three domains is therefore mutually necessary.

Two cross-cutting requirements apply across all three domains. The first is a validation mechanism. Any enforceable framework must provide an operational definition of the boundary between legitimate AI-assisted scholarship and the substitution of Islamic scholarly validation processes. Without this definition, enforcement is impossible. Policy becomes aspirational rather than functional.

The second cross-cutting requirement is a mandatory review cycle. AI capabilities and adoption patterns are evolving rapidly. Governance frameworks that lack a built-in sunset clause or periodic review requirement will be outdated before full implementation. A minimum two-year review cycle is recommended as a structural standard. This is not an optional feature.

Translating these principles into institutional reality requires four structural actions. These actions are mutually reinforcing rather than sequentially ordered. Kemenag must issue an AI umbrella regulation, specifically a Peraturan Menteri Agama. This regulation must establish a mandatory governance mandate for all PTKI under Kemenag jurisdiction. It is the essential regulatory signal without which institutional reform stalls.

Kemenag's regulatory inertia is itself a symptom of the collective action failure this paper diagnoses. The ministry waits for consensus that institutional actors have not produced. Institutions, in turn, wait for the regulatory mandate the ministry has not issued. Breaking this deadlock requires a prior coordination mechanism. Specifically, it requires a mandated multi-stakeholder task force convened under Kemenag authority.

This task force must comprise PTKI rectors, ulama representatives, and AI technologists. Its explicit function is to produce a draft regulation within a defined timeline. The Peraturan Menteri Agama is the output of this process. It is not its precondition. Without this sequencing, reform remains structurally blocked.

Without a regulatory signal from above, institutional inertia is not a failure of will. It is a structurally predictable outcome. PTKI leadership has no external accountability to respond to and no regulatory template to anchor policy development (Walhidayah & Surendro, 2025). Simultaneously, PTKI leadership must invest in AI governance literacy among university leaders, lecturers, and

administrators (Surahman, 2025). Governance frameworks cannot be constructed or sustained without the human capital to understand them.

Policy design must be structured as a collaborative process. It must involve ulama, technology academics, students, and policy stakeholders. Governance that excludes ulama will lack Islamic legitimacy. Governance that excludes technical experts will lack operational coherence. Governance that excludes students will lack the contextual grounding that makes policy implementable in practice.

Finally, PTKI should pursue adaptive benchmarking from Islamic universities in Malaysia and the Gulf states. Institutions should learn from what those universities are constructing and adapt it to the Indonesian PTKI context. They must resist the temptation to translate frameworks designed for different institutional and cultural environments. The goal is an AI governance framework that is distinctively Islamic and distinctively Indonesian. It should not copy what others have done, but contribute to what the global Islamic scholarly community is still working out.

Conclusion

This article set out to answer two questions the existing literature had left unaddressed: why has no institution-wide AI governance policy materialised across Indonesian PTKI, and what are the epistemic consequences of that failure? The answers are neither reassuring nor ambiguous. The governance vacuum is structural and self sustaining, produced by three mutually reinforcing factors: jurisdictional fragmentation between Kemenag and Kemendikbudristek, normative paralysis induced by the unresolved Islam-AI value tension, and the complete absence of binding regulatory guidance from Kemenag. Together, these factors produce a collective action failure that no single institutional actor has the incentive to break unilaterally.

The consequences extend beyond administration. The epistemic authority of ulama faces compounding erosion as AI-generated Islamic content circulates without institutional validation frameworks. PTKI academic outputs occupy an undefined epistemological space. Indonesia, the world's largest Muslim majority country, remains absent from the global conversation in which Islamic universities elsewhere are already constructing the frameworks that will define Islamic AI ethics for the coming generation.

Three theoretical contributions follow from this analysis. The Three-Dimensional Governance Gap Framework provides a transferable analytical instrument for AI governance studies in Islamic HEI contexts. The concept of epistemic consequences of governance vacuum redirects AI governance scholarship from its predominantly technical preoccupations toward institutional epistemology. The integration of Islamic epistemology with AI governance theory

establishes that global frameworks must be reconstructed from within the Islamic tradition, not adopted uncritically from secular instruments whose epistemological assumptions are neither neutral nor transferable.

The practical imperatives are equally clear. Kemenag must issue binding regulation; without it, institutional inertia is structurally inevitable, not a failure of will. PTKI leadership must begin governance construction now, with available resources, rather than waiting for regulatory permission or scholarly consensus. Ulama and AI technologists must together produce the operational definition of AI's legitimate boundaries in Islamic scholarship that no governance framework can function without.

The research agenda this article opens is significant. Priority directions include comparative studies across Islamic universities in Malaysia, the Gulf states, and South Asia; empirical assessment of institutional readiness across PTKI; a proof-of-concept pilot of a maqasid al-shari'ah-grounded governance model; and longitudinal monitoring of Kemenag policy developments. These directions together would provide the empirical and operational foundations that this article's analytical findings require to become fully actionable.

PTKI stand at the intersection of two pressures: the accelerating force of AI-driven transformation and the imperative to preserve the Islamic epistemological tradition that constitutes their institutional identity. The absence of governance is not a neutral position between these pressures. It is a choice, whether made actively or by neglect, with consequences that compound with every semester that passes ungoverned. The question is no longer whether PTKI will use AI. It is who will write the rules of that use. Those rules will either be written by the Islamic scholarly tradition itself, or by the market logic and platform policies that are already filling the vacuum it has left open. The answer depends entirely on whether PTKI move, and move now, from institutional waiting to active governance construction.

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