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AI, ETHICS, AND ISLAMIC HIGHER EDUCATION: NAVIGATING THE TENSIONS BETWEEN PRACTICAL RISK MITIGATION AND RELIGIOUS NORMATIVITY

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Abstract

The rapid development of artificial intelligence (AI) has transformed the landscape of higher education, including State Islamic Higher Education in Indonesia, referred to in this study as Perguruan Tinggi Keagamaan Islam Negeri (PTKIN). In this context, this study examines PTKIN lecturers' perceptions of AI development, their awareness of potential risks, and the strategies they employ for risk mitigation. This study is significant as it also explores whether Islamic ethical principles are integrated or absent in these processes. Using a qualitative approach, data were collected through interviews and document analysis, including institutional guidelines and academic integrity policies, involving lecturers from diverse disciplinary backgrounds at two PTKINs. The findings reveal two main orientations in AI risk management. Some lecturers emphasize technical controls such as plagiarism detection, supervised examinations, and accuracy assurance, while others highlight ethical guidance, verification, and the cultivation of critical awareness. Despite these efforts, Islamic values, although frequently mentioned, remain declarative and have not yet been institutionalized into formal university governance structures. By reinterpreting the COSO Enterprise Risk Management (ERM) framework through the lens of maqāṣid al-sharīʿah, this study proposes an integrative model that connects technical risk mitigation with Islamic normativity. The study concludes that PTKIN has the potential to pioneer an Islamic framework for AI ethics and governance that aligns technological innovation with moral accountability and contributes to the broader transformation of Islamic education in the digital era.

Keywords: *Artificial Intelligence; State Islamic Higher Education; PTKIN; COSO ERM; Maqāṣid al-Sharīʿah; AI Risk Management*

Abstrak

Perkembangan pesat kecerdasan buatan (AI) telah mengubah lanskap pendidikan tinggi, termasuk Perguruan Tinggi Keagamaan Islam Negeri (PTKIN) di Indonesia. Dalam konteks tersebut, studi ini menelaah persepsi dosen PTKIN terhadap perkembangan AI, kesadaran mereka terhadap potensi risiko, serta strategi yang mereka terapkan untuk mitigasi risiko. Penelitian ini juga penting karena mengkaji sejauh mana prinsip-prinsip etika Islam diintegrasikan atau justru tidak hadir dalam

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10.22373/jiif.v26i1.32978

proses tersebut. Dengan menggunakan pendekatan kualitatif, data dikumpulkan melalui wawancara dan analisis dokumen, termasuk pedoman kelembagaan dan kebijakan integritas akademik, yang melibatkan dosen dari berbagai latar belakang disiplin ilmu di dua PTKIN. Temuan penelitian menunjukkan adanya dua orientasi utama dalam pengelolaan risiko AI. Sebagian dosen menekankan pengendalian teknis seperti deteksi plagiarisme, pelaksanaan ujian dengan pengawasan, dan penjaminan akurasi, sedangkan yang lain lebih menekankan pembimbingan etis, verifikasi, dan pengembangan kesadaran kritis. Meskipun berbagai upaya tersebut dilakukan, nilai-nilai Islam yang sering disebutkan masih bersifat deklaratif dan belum terlembagakan dalam struktur tata kelola universitas. Dengan mereinterpretasikan kerangka COSO Enterprise Risk Management (ERM) melalui perspektif maqāṣid al-sharīʿah, studi ini mengusulkan sebuah model integratif yang menghubungkan mitigasi risiko teknis dengan norma-norma Islam. Penelitian ini menyimpulkan bahwa PTKIN memiliki potensi untuk memelopori kerangka etika dan tata kelola AI berbasis Islam yang menyelaraskan inovasi teknologi dengan akuntabilitas moral serta berkontribusi pada transformasi pendidikan Islam di era digital.

Kata Kunci: *Kecerdasan Buatan, Pendidikan Tinggi Keagamaan Islam Negeri, PTKIN, COSO ERM, Maqāṣid al-Sharīʿah, Manajemen Risiko AI*

مستخلص

إن التطوّر السريع للذكاء الإصطناعي (AI) قد غيّر مظهر التعليم العالي بما فيها من الجامعة الإسلامية الحكومية (PTKIN) في إندونيسيا. وفي ضمن هذه الظاهرة يبحث هذا البحث العلمي أراء أعضاء المدرسين في PTKIN عن تطوّر الذكاء الإصطناعي ومدى وعيهم عن مخاطره وخطط الإستراتيجية لتخفيف هذه المخاطر. وهذا البحث مهم لأنه بحث تأثير المبادئ الإسلامية لتخفيف هذه المخاطر من عدمه. وباستخدام المنهج النوعي تمّ جمع المعلومات عن طريق المحاورة و تحليل الوثائق الذي من ضمنها دليل المؤسّسي و سياسة نزاهة الأكادمية بمشاركة أعضاء المدرسين في المواد المختلفة في جامعتي PTKIN. تنبئ نتائج البحث وجود اتجاهين في إدارة مخاطر الذكاء الإصطناعي، بعض المدرسين يميلون إلى تقوية الضوابط التقنية مثل نظام كشف الانتحال، وعقد الإمتحانات بالمراقبة , وضمان دقة. ويميل بعض الأخر إلى التوجيه الأخلاقي، والتبيّن، وتنمية الوعي النقدي. ومهم ما بذل من تلك الجهود في إدارة هذه المخاطر، لم تنل المبادئ الإسلامية إلا مجرد الشعار لم تنفّذ في هيكل تنظيم الجامعات. ببيان نظام COSO Enterprise Risk Management من منظور المقاصد الشرعية يقترح هذا البحث نظام تكاملي ربط إدارة المخاطر التقنية بالمبادء الإسلامية. يلخّص هذا البحث أن PTKIN له قدرة ليكون رائدا في إنشاء النظام لإدارة الذكاء الإصطناعي مستمدا من القيم الإسلامي الذي يدمج اختراعات التكنولوجيا بالقيم الأخلاقية، وله دور المساهة في تحوّل نظام التربية الإسلامية في العصر الرقمي

الكلمات الرئسية: الذكاء الإصطناعي; التعليم العالي الحكومي; PTKIN; COSO ERM;لمقاصد الشرعية; إدارة مخاطر الذكاء الإصطناعي

A. Introduction

The rapid advancement of artificial intelligence (AI) in higher education has reshaped teaching, learning, assessment, and institutional governance.[1] While AI offers opportunities for

[1] Helen Crompton and Diane Burke, "Artificial Intelligence in Higher Education: The State of the Field," *International Journal of Educational Technology in Higher Education* 20, no. 1 (April 24, 2023): 22, doi:10.1186/s41239-023-00392-8; Omid Noroozi, Mohammad Khalil, and Seyyed Kazem Banihashem, "Artificial Intelligence in Higher Education: Impact Depends

personalized learning, administrative efficiency, and pedagogical innovation, its adoption also brings ethical and pedagogical challenges.[2] These challenges include digital plagiarism, algorithmic bias from skewed training data, unreliable or fabricated outputs, and concerns that heavy reliance on generative AI may weaken students' independent reasoning and critical thinking. As a result, scholars argue that AI adoption should be viewed not only as a technical improvement but also as a governance and ethical issue requiring clear regulation and risk management.[3] This perspective aligns with critical theories of technology, which distinguish instrumental views of technology from substantivist approaches that emphasize its embedded social and moral dimensions.[4] Such distinctions continue to inform contemporary debates on AI ethics and governance in education. A central challenge for higher education is balancing AI's benefits with the need to maintain academic integrity and responsible institutional practice.[5]

International scholarship generally approaches AI risk mitigation through universal ethical frameworks emphasizing fairness, accountability, transparency, and human oversight.[6] These frameworks, often embedded in institutional AI guidelines or global ethical codes, highlight the importance of responsible innovation and governance structures that prevent harmful or discriminatory AI practices. However, such approaches often rely on general principles that may overlook the cultural, moral, and theological contexts shaping technology

on Support, Pedagogy, Human Agency, and Purpose," *Innovations in Education and Teaching International*, September 3, 2025, https://www.tandfonline.com/doi/abs/10.1080/14703297.2025.2539579; Ionica Oncioiu and Anca Roxana Bularca, "Artificial Intelligence Governance in Higher Education: The Role of Knowledge-Based Strategies in Fostering Legal Awareness and Ethical Artificial Intelligence Literacy," *Societies* 15, no. 6 (June 2025): 144, doi:10.3390/soc15060144.

[2] Damian Okaibedi Eke, "ChatGPT and the Rise of Generative AI: Threat to Academic Integrity?," *Journal of Responsible Technology* 13 (April 1, 2023): 100060, doi:10.1016/j.jrt.2023.100060; Yuri Reina Marín et al., "Ethical Challenges Associated with the Use of Artificial Intelligence in University Education," *Journal of Academic Ethics* 23, no. 4 (December 1, 2025): 2443–67, doi:10.1007/s10805-025-09660-w; Sandra Leaton Gray, Dominic Edsall, and Dimitris Parapadakis, "AI-Based Digital Cheating At University, and the Case for New Ethical Pedagogies," *Journal of Academic Ethics* 23, no. 4 (December 1, 2025): 2069–86, doi:10.1007/s10805-025-09642-y.

[3] Aashish Ghimire and John Edwards, "From Guidelines to Governance: A Study of AI Policies in Education," in *Artificial Intelligence in Education. Posters and Late Breaking Results, Workshops and Tutorials, Industry and Innovation Tracks, Practitioners, Doctoral Consortium and Blue Sky*, ed. Andrew M. Olney et al. (Cham: Springer Nature Switzerland, 2024), 299–307, doi:10.1007/978-3-031-64312-5_36; Ravit Dotan, Lisa S. Parker, and John G. Radzilowicz, "Responsible Adoption of Generative AI in Higher Education: Developing a 'Points to Consider' Approach Based on Faculty Perspectives," in *The 2024 ACM Conference on Fairness, Accountability, and Transparency*, 2024, 2033–46, doi:10.1145/3630106.3659023.

[4] Andrew Feenberg, *Transforming Technology: A Critical Theory Revisited*, Im Kolophon: 2010 (New York, NY: Oxford Univ. Press, 2010).

[5] Leaton Gray, Edsall, and Parapadakis, "AI-Based Digital Cheating At University, and the Case for New Ethical Pedagogies"; Hamish Coates, Gwilym Croucher, and Angel Calderon, "Governing Academic Integrity: Ensuring the Authenticity of Higher Thinking in the Era of Generative Artificial Intelligence," *Journal of Academic Ethics* 23, no. 4 (December 1, 2025): 2015–28, doi:10.1007/s10805-025-09639-7.

[6] Alba Morales Tirado, Paul Mulholland, and Miriam Fernandez, "Towards an Operational Responsible AI Framework for Learning Analytics in Higher Education" (arXiv, October 8, 2024), doi:10.48550/arXiv.2410.05827; Amna Batool, Didar Zowghi, and Muneera Bano, "Responsible AI Governance: A Systematic Literature Review" (arXiv, December 18, 2023), doi:10.48550/arXiv.2401.10896; Danilo Ribeiro et al., "Toward Effective AI Governance: A Review of Principles" (arXiv, May 29, 2025), doi:10.48550/arXiv.2505.23417.

use in religious or value-based educational settings. This gap is particularly relevant for Islamic higher education, where technology is viewed not as value-neutral but as a moral trust (*amanah*) that must align with divine and ethical principles.

This issue is especially salient for State Islamic Higher Education in Indonesia, referred to in this study as *Perguruan Tinggi Keagamaan Islam Negeri* (PTKIN), which carry a dual mandate: achieving academic excellence while upholding Islamic ethical values. AI adoption at PTKIN therefore demands evaluation not only in terms of pedagogy and efficiency but also through Islamic moral commitments. Islamic intellectual traditions emphasize that science and technology must serve moral responsibility and advance *maṣlaḥah* (public good). Thus, PTKIN must strike a balance between technological innovation and spiritual integrity.

Recent Indonesian scholarship shows increasing concern about AI ethics in Islamic higher education, though most studies remain conceptual or normative. Baharuddin et al. argue that AI use must be anchored in Islamic ethics to protect moral and spiritual integrity.[7] Pramudita highlights tensions between digital innovation and the preservation of Islamic moral values among Generation Z students.[8] Anggraeni and Farida identify gaps in educators' digital ethics literacy, particularly on plagiarism, data privacy, and AI dependency.[9] Similarly, Fadli and Helmi advocate embedding *maqāṣid al-sharīʿah* principles in AI governance to ensure that technological development advances *maṣlaḥah*.[10] Hendriawan et al. caution against technological determinism and emphasize the necessity of viewing AI as a value-laden tool rather than neutral.[11] Although these studies make important contributions, they remain primarily conceptual and offer limited empirical insight into how AI ethics and risks are interpreted in everyday academic practice within PTKIN.

To address these limitations, this study adopts a risk-governance perspective to examine how PTKIN lecturers perceive AI-related risks and develop mitigation strategies within an Islamic ethical framework. Among existing models, the COSO Enterprise Risk Management (COSO ERM) framework is particularly relevant because it provides a comprehensive,

[7] Baharuddin Baharuddin et al., "Pendidikan Islam Dalam Era Kecerdasan Buatan: Membangun Peradaban Berbasis Etika Dan Teknologi Di Indonesia | JIIP - Jurnal Ilmiah Ilmu Pendidikan," 2025, https://jiip.stkipyapisdompu.ac.id/jiip/index.php/JIIP/article/view/7432.

[8] Nafil Siraj Pramudita, "Implikasi AI Bagi Gen Z Di Era Pendidikan Digital: Tantangan Pengembangan Etika Islam," *Jurnal Pendidikan Islam* 16, no. 01 (May 31, 2025): 13–21.

[9] Sherly Rosa Anggraeni and Rully Farida, "Etika Pemanfaatan Informasi Dalam Pembelajaran Berbasis AI: Refleksi Filosofis Terhadap Peran Perpustakaan Digital," *Paradigma: Jurnal Filsafat, Sains, Teknologi, Dan Sosial Budaya* 31, no. 2 (June 30, 2025): 123–34, doi:10.33503/paradigma.v31i2.1919.

[10] Riski Maulana Fadli and Achmad Mahrus Helmi, "Maqasid Syariah Perspektif Ibnu 'Ashur: Kajian Kritis Dan Kontekstual," *Al-Bustan: Jurnal Studi Islam Dan Sosial Keagamaan* 1, no. 1 (July 29, 2024): 98–113, doi:10.2024/9vrjgv18.

[11] Priyatna Hendriawan et al., "Artificial Intelligence Dalam Konstruk Filsafat Ilmu: Eksistensi Manusia Sebagai Subjek Pendidikan," *Paradigma: Jurnal Filsafat, Sains, Teknologi, Dan Sosial Budaya* 30, no. 1 (May 30, 2024): 409–19.

institution-wide system for identifying, assessing, and responding to risks linked to emerging technologies. Unlike sector-specific guidelines, COSO ERM embeds risk management into an organization's governance, strategy, operations, and culture,[12] allowing universities to view AI not only as a pedagogical tool but also as a source of interconnected ethical, operational, legal, and reputational risks.

The suitability of COSO ERM for AI governance in higher education appears in three key areas. First, it enables holistic risk categorization, allowing institutions to place concerns such as algorithmic bias, privacy vulnerabilities, assessment integrity, and compliance obligations within a single framework.[13] Second, it emphasizes governance structures and accountability, supporting stronger institutional oversight of AI use instead of fragmented or ad-hoc decisions.[14] Third, it highlights continuous monitoring and internal controls, which are crucial given the fast-changing nature of AI.[15] Compared with ISO 31000 or the NIST Risk Management Framework, COSO ERM offers greater flexibility for non-commercial institutions and accommodates qualitative aspects such as ethics, reputation, and organizational culture.

COSO ERM is also well aligned with PTKIN. Its focus on accountability, internal control, and ethical governance resonates with Islamic principles of *amanah* (trust), stewardship, and moral responsibility.[16] Studies in Islamic and Sharia-based institutions show that COSO's control mechanisms fit well with commitments to transparency, integrity, and responsible decision-making.[17] This aligns with broader Islamic thought, where risk management aims not only to prevent harm but also to preserve *maṣlaḥah* and uphold the *maqāṣid al-sharīʿah*: protecting religion (*dīn*), life (*nafs*), intellect (*ʿaql*), lineage (*nasl*), and property (*māl*). In the context of AI, safeguarding intellect (*ḥifẓ al-ʿaql*) is especially important,

[12] COSO, *Enterprise Risk Management : Integrating with Strategy and Performance* (Committee of Sponsoring Organizations of the Treadway Commission, 2017), https://cir.nii.ac.jp/crid/1971993809788794385.

[13] Arif Ali Khan et al., "Ethics of AI: A Systematic Literature Review of Principles and Challenges" (arXiv, September 12, 2021), doi:10.48550/arXiv.2109.07906; Batool, Zowghi, and Bano, "Responsible AI Governance."

[14] Ribeiro et al., "Toward Effective AI Governance."

[15] Tirado, Mulholland, and Fernandez, "Towards an Operational Responsible AI Framework for Learning Analytics in Higher Education."

[16] Aan Nurhasanah and Yono Haryono, "Strategi Pengembangan Manajemen Risiko Pada Perguruan Tinggi Swasta Islam Di Indonesia Dengan COSO Framework," *IRTIQO': Postgraduate Journal of Islamic Economics, Finance and Accounting Studies* 3, no. 2 (2024): 293–315; Mohamad Djasuli, "Internal Control Perspective Based on Islamic Worldview," *Journal of Auditing, Finance, and Forensic Accounting* 9, no. 2 (October 31, 2021): 77–85, doi:10.21107/jaffa.v9i2.11992; Vita Sarasi, Joval Ifghaniyafi Farras, and Jasmine Hanjani Putri, "ANALISIS MANAJEMEN RISIKO WAKAF UANG DENGAN METODE ERM COSO," *Jurnal Ilmiah Ekonomi Islam* 8, no. 2 (July 8, 2022): 1792–1807, doi:10.29040/jiei.v8i2.3260.

[17] Zuraidah Zuraidah, Wahidmurni Wahidmurni, and Ilfi Nur Diana, "ISLAMIC FINANCE AND COSO ERM: EXAMINING STRATEGIC DRIVERS OF PERFORMANCE IN SHARIA BANKS," *EL DINAR: Jurnal Keuangan Dan Perbankan Syariah* 12, no. 2 (2024): 290–315, doi:10.18860/ed.v12i2.32813.

as excessive dependence on AI may weaken human reasoning and moral judgment. Thus, AI governance in PTKIN requires combining the analytical strength of COSO ERM with Islamic ethical commitments to balance innovation and moral accountability.

Despite these conceptual overlaps, empirical research on AI risk governance within PTKIN remains limited. Three key gaps stand out. First, no empirical studies have used the COSO ERM framework to explore AI risk mitigation in PTKIN. Second, earlier research has not compared technical mitigation strategies, such as verification, control, and audit mechanisms, with religious–normative strategies rooted in Islamic values. Third, existing studies on digital transformation in Islamic universities are mostly cross-sectional and generic, overlooking differences across individuals, academic cultures, and institutional contexts.[18]

This study addresses these gaps by exploring how lecturers at two prominent PTKINs in Indonesia perceive AI-related risks, develop mitigation strategies, and navigate tensions between practical governance and religious normativity. A qualitative case study design was used, with two PTKIN institutions selected to reflect variation in institutional context and academic culture. Data were collected through semi-structured interviews with four lecturers from diverse disciplines, including Physics, Information Technology, English, and Islamic Education Management, providing a broad view of how academic backgrounds shape interpretations of AI risks and mitigation approaches.[19]

Data analysis followed a multi-stage qualitative coding process informed by Silverman's (2017) guidelines for rigorous interpretive analysis. Open coding generated initial concepts and patterns from interview transcripts, institutional documents, and field notes.[20] These were refined through axial coding, where inductive insights were compared with deductive categories derived from the COSO ERM framework and the *maqāṣid al-sharīʿah* principles. Finally, selective coding synthesized these categories into broader themes that captured the interplay between technical risk controls, institutional governance mechanisms, and Islamic ethical commitments in PTKIN.

Participants were selected using purposive sampling to ensure the inclusion of information-rich cases relevant to the research objectives. Lecturers were intentionally chosen

[18] Gandung Troy Sulistyantoro et al., "Shaping Artificial Intelligence Governance and Risk Management in the Public Sector: Regulatory Insights," *Lex Publica* 11, no. 1 (June 30, 2024): 161–81, doi:10.58829/lp.11.1.2024.261.
[19] Virginia Braun and Victoria Clarke, "Can I Use TA? Should I Use TA? Should I *Not* Use TA? Comparing Reflexive Thematic Analysis and Other Pattern-based Qualitative Analytic Approaches," *Counselling and Psychotherapy Research* 21, no. 1 (March 2021): 37–47, doi:10.1002/capr.12360.
[20] David Silverman, ed., *Qualitative Research* (Los Angeles: SAGE Publications Ltd, 2016).

based on their active teaching roles at PTKIN and their direct experience with AI in teaching, assessment, or other academic activities, enabling them to provide meaningful insights into AI-related risks and mitigation strategies within the PTKIN context. To capture diverse perspectives, participants represented different disciplinary backgrounds across the two institutions. Table 1 presents the profile of the research participants.

Table 1. Profile of Research Participants

Respondent Initial	Institution	Field of Study	First Use of AI
SR	PTKIN SH	Physics	2023
ND	PTKIN SH	English	2023
AFR	PTKIN SK	Information Technology	2023
HR	PTKIN SK	Islamic Education Management	2023

Through this multi-site design, the study captures both the technical and normative dimensions of AI risk mitigation in PTKIN, forming the empirical basis for the analysis and discussion that follow. Guided by the earlier conceptual and empirical gaps, the study addresses four research questions: (1) how PTKIN lecturers perceive the ethical, pedagogical, and institutional risks of AI in teaching and assessment; (2) what mitigation strategies they use and how these reflect both technical controls and Islamic ethical principles; (3) how lecturers' academic backgrounds shape variations in AI governance practices; and (4) how the COSO ERM framework can be interpreted alongside *maqāṣid al-sharīʿah* to propose an integrative model for AI governance in PTKIN.

B. Result and Discussion

The results are organized into four key themes: how lecturers interpret AI in academic life, how they integrate it into teaching practices, how they perceive its ethical and pedagogical risks, and how they develop strategies to mitigate those risks. Together, these themes address the research questions of the study by examining lecturers' perceptions of AI-related risks, their mitigation strategies, and variations across disciplinary backgrounds. While the empirical findings primarily inform the first three research questions, the fourth research question concerning the integration of the COSO ERM framework and *maqāṣid al-sharīʿah* is addressed analytically in the Discussion section.

1. Interpreting Artificial Intelligence in Academic Life

A recurring theme emerging from the interviews is how lecturers interpret artificial intelligence (AI) within their academic work. Across disciplines, participants consistently viewed AI as an inevitable development that is reshaping teaching and learning practices. They regarded AI as both a valuable innovation and a potential source of disruption. Lecturers expressed cautious optimism, acknowledging that while AI can enhance academic efficiency, it also requires critical reflection and ethical consideration.

SR described AI as part of everyday academic practice but emphasized the need for thoughtful use. He explained, “AI helps me create examples of questions and short case studies. It saves time, but I always revise them to match the students’ level.” His comments point to a pragmatic stance in which AI is seen as a supportive tool that nevertheless demands human oversight to ensure conceptual and contextual accuracy. SR further highlighted that institutional guidance is essential, as responsible use should extend beyond individual judgment.

This awareness of technological inevitability was echoed by AFR, who emphasized adaptive management rather than resistance. As he put it, “I never considered Google something to resist, but rather a partner to be managed wisely. I take the same approach to AI; instead of being defensive, I prefer to use it constructively.” For AFR, adaptability is crucial for maximizing benefits while mitigating risks. He also dismissed the idea that AI could replace human beings, noting that human intuition and creativity, often non-linear and unpredictable, remain outside the domain of algorithms.

ND offered another perspective, presenting AI as an intellectual partner that supports creativity and reflective teaching. He shared, “when I face a concept that is difficult to explain, I ask AI to simplify it. Sometimes the examples it gives help me find better ways to teach.” This view reflects an adaptive mindset that considers AI an integral component of modern pedagogy, while still affirming the centrality of human reasoning in instructional design.

A more cautious approach emerged in HR’s reflection, particularly regarding verification and academic ethics. He remarked, “AI helps me collect information faster, but I cannot rely on it fully. I still need to check the accuracy through credible academic sources.” Describing this as a semi-trust relationship, HR underscored that while AI enhances efficiency, the final academic judgment must remain with humans. He also emphasized ethical responsibility in student use of AI: “students may use AI for writing assignments, but they must paraphrase and support it with proper references. That is part of academic honesty.”

Taken together, these views illustrate how lecturers negotiate the balance between technological adaptation and ethical responsibility. Although their emphases vary, from technical precision to critical verification, each participant demonstrates a commitment to using AI in a discerning and responsible manner.

Overall, this theme shows that lecturers interpret AI as both an opportunity and a challenge requiring careful judgment. Their reflections reveal an evolving understanding of AI not merely as a technological tool, but also as a catalyst for reassessing pedagogical practices. In navigating openness and restraint, PTKIN lecturers demonstrate an ethical stance that aligns technological innovation with the moral and intellectual responsibilities of PTKIN.

2. Integrating AI into Teaching Practices

The research reveals that lecturers integrate AI into their teaching in diverse yet complementary ways. Across disciplines, AI is viewed as a tool that enhances efficiency, creativity, and access to knowledge. However, its integration is guided by professional judgment and ethical considerations rather than uncritical adoption.

SR described how AI supports instructional design and assessment preparation. He stated, “I use ChatGPT to create problem examples and questions for students, but I always adjust them to fit the learning objectives. AI makes the work faster, but it still needs correction.” This perspective illustrates how technological assistance is combined with pedagogical sensitivity. AI is regarded as a resource that can inspire new learning materials, but human refinement remains essential to ensure conceptual clarity and alignment with students’ abilities. SR also noted that although AI can be used for practice tasks, students are prohibited from relying on it for final assignments to preserve their analytical and manual skills.

A similar yet more transformative view was expressed by AFR, who emphasized AI’s potential to reshape academic workflows in higher education. He explained, “AI helps me develop learning modules more efficiently. It can summarize long texts and provide structure for lesson plans. The challenge is to use it wisely so that it supports, not replaces, our academic work.” For AFR, AI facilitates workflow improvement but requires awareness of its limitations. He positioned AI within a broader digital transformation that necessitates not only technical competencies but also digital ethics and critical literacy.

ND highlighted AI’s role in enriching language teaching and learning activities. He shared, “I often ask AI to generate reading passages or examples for grammar lessons. It helps me save time, but I still edit the content to make sure it matches the students’ context and

proficiency level." This perspective demonstrates how lecturers use AI creatively to enhance classroom materials while maintaining control over quality, relevance, and cultural appropriateness. AI serves as a partner in content creation, yet pedagogical decisions remain firmly grounded in human expertise.

HR described how AI contributes to both teaching and research activities. He explained, "AI can help summarize articles and identify recent research trends. It is very useful at the beginning of a project, but I always verify the results and check the sources myself." He added that AI has simplified many academic tasks, such as drafting outlines and checking grammar, but must be approached with intellectual rigor and ethical awareness. For HR, AI functions as a facilitator that supports human reasoning rather than replaces it.

Overall, lecturers integrate AI into their teaching through a balanced combination of innovation and responsibility. They recognize its capacity to streamline instructional tasks, generate learning materials, and support classroom activities, yet remain aware that meaningful learning depends on human interpretation, contextual judgment, and ethical accountability. The findings suggest that the integration of AI at PTKIN is shaped not only by technological readiness but also by lecturers' reflective pedagogical judgment, ensuring that digital tools align with the educational and moral values of PTKIN.

3. Navigating the Ethical and Pedagogical Risks of AI

While lecturers at PTKIN recognize the potential benefits of AI, they also express strong concerns about its ethical, pedagogical, and intellectual risks. These concerns go beyond plagiarism and misinformation, touching on deeper issues such as weakened critical thinking, overreliance on instant answers, and the erosion of academic honesty. Across disciplines, lecturers highlight the importance of discernment and moral guidance in navigating AI use responsibly.

One lecturer noted that AI can generate inaccurate or incomplete information when used uncritically. SR explained, "AI is not always right. Sometimes the formula or data it gives is wrong. That is why I always remind students to double-check everything before using it." His remarks illustrate a core tension in scientific learning: the convenience of AI must be balanced with verification and analytical engagement. He worries that students may accept AI-generated outputs without questioning them, weakening their understanding of foundational concepts.

This concern over intellectual dependency also surfaced in AFR's reflections, though framed within the wider context of digital ethics. He stated, "the main problem is not the

technology itself but how people use it. If students depend too much on AI, they lose the habit of thinking critically." He emphasized the need to cultivate digital responsibility and self-regulation as part of everyday teaching. Beyond critical thinking, he pointed out additional risks such as data privacy issues and algorithmic bias, arguing that institutions must develop clear policies to support fair and ethical use.

Linked to these ethical challenges is the issue of authenticity in students' academic work. ND observed, "students sometimes use AI to write essays, and the results look perfect but lack their own ideas. I always tell them that using AI is fine, but they must show their personal understanding." For him, the central challenge is not prohibiting AI outright but encouraging students to maintain originality and reflective engagement. To address this, he integrates discussions on AI ethics into classroom activities, prompting students to consider how technology shapes their learning habits and values.

Concerns about student behavior and discipline were also raised by HR, who emphasized how instant access to AI-generated information affects learning depth and responsibility. He explained, "because technology now makes everything so easy, information can be obtained instantly. However, the consequence is that retention or memory of the information often doesn't last long; it's easily forgotten." HR noted that the ease provided by AI may encourage students to procrastinate and become less disciplined in managing their own learning, highlighting a behavioral risk that extends beyond mere technical inaccuracy.

Taken together, the perspectives of these lecturers reveal that navigating AI in higher education requires more than technical proficiency. It demands ethical awareness, critical judgment, and sustained attention to students' learning habits and discipline. Rather than viewing AI merely as a threat or a convenience, lecturers at PTKIN position it within a broader pedagogical framework, one that seeks to ensure that technological progress does not weaken the core intellectual effort expected in higher education.

4. Strategies for Mitigating AI Risks in Higher Education

In response to the potential risks of AI, lecturers at PTKIN have developed a range of strategies to ensure that its use remains ethical, constructive, and aligned with educational goals. Their approaches emphasize guidance, transparency, and reflective practice rather than prohibition. Across disciplines, these strategies aim to balance technological adoption with the cultivation of critical awareness and moral responsibility among students.

SR described the importance of teaching students to use AI critically instead of banning it outright. He remarked, “I do not prohibit my students from using AI, but I always ask them to explain how they used it and what part was generated by the system. That way, they stay responsible for their own work.” For him, open discussion about AI use fosters honesty and self-evaluation. To maintain students’ independence, he incorporates AI-related exercises into class activities while keeping manual assessment methods for examinations to ensure that students demonstrate genuine understanding.

A similar emphasis on responsibility appears in AFR’s approach, although framed through the lens of digital literacy and accuracy. He stated, “it is impossible to stop students from using AI, so we must teach them how to use it correctly. I always tell them to check the accuracy of every output and mention AI use in their reports.” He views transparency as part of academic integrity and calls for collaborative policy development between lecturers and institutions to ensure assignments involving AI follow ethical and procedural standards. In his view, institutional guidelines should support innovation while providing a clear framework for fairness and accountability.

Another strategy focuses on strengthening students’ originality and critical thinking. ND explained, “I ask my students to compare their own writing with AI-generated text and reflect on the differences. It helps them see what the machine can and cannot do.” This reflective approach encourages students to analyze their learning processes and recognize the limitations of automated tools. He also incorporates discussions on AI ethics into classroom activities to raise awareness about plagiarism, authorship, and the importance of personal expression.

HR focuses on fostering discipline and self-management in learning. He explained, “Students must learn not to rely on technology for everything. They have to manage their own learning.” HR incorporates reflective activities and frequent check-ins to help students build habits of consistency and responsibility. He believes that effective mitigation requires guiding students to balance the convenience of AI with disciplined learning practices.

Collectively, these strategies demonstrate that lecturers at PTKIN view AI not merely as a challenge but as an opportunity to strengthen critical thinking, academic integrity, and self-regulation. By promoting responsible use, transparency, and reflective engagement, they aim to ensure that AI integration supports, rather than replaces, students’ intellectual development.

Discussion

Building on the empirical findings, this section addresses the study's key insights through four interrelated themes and engages with the fourth research question through analytical interpretation. The themes range from lecturers' orientations toward AI, reflections of COSO ERM elements in mitigation practices, and the gap between technical responses and Islamic normativity, to the proposed integration of technical risk management with *maqāṣid al-sharīʿah*. Together, these themes clarify how AI is negotiated within PTKIN's academic and moral context.

1. Common Grounds and Distinct Orientations in AI Engagement

The findings show that PTKIN lecturers share a general awareness of AI's growing influence in academic life. Regardless of role or background, they see AI as an inevitable development that requires both strategic use and ethical attention. This mirrors global scholarship describing AI as a driver of change in teaching, assessment, and academic work.[21] Within this common view, however, lecturers differ in how they interpret AI's role.

Two main orientations emerge: a pragmatic–technological orientation and an ethical–reflective orientation. These orientations do not follow disciplinary boundaries but appear across individual practices. This distinction reflects Feenberg's (2002) contrast between instrumental views of technology, which treat it as a neutral tool, and substantivist views, which see technology as carrying social and moral implications.[22] Similar contrasts also appear in AI-in-education research, where educators tend to emphasize either functional benefits or ethical responsibilities.[23]

The pragmatic–technological orientation highlights efficiency, accuracy, and adaptability. Lecturers note AI's value for preparing teaching materials, generating question banks, administrative support, and data-related tasks. These views align with studies showing that educators adopt AI to reduce workload and increase productivity.[24] Even so, they stress the need for human oversight.

The ethical–reflective orientation emphasizes academic integrity, critical awareness, and responsible digital behavior. From this perspective, AI must be aligned with broader

[21] Wayne Holmes, Maya Bialik, and Charles Fadel, *Artificial Intelligence In Education* (Boston: The Center for Curriculum Redesign, 2019); Olaf Zawacki-Richter et al., "Systematic Review of Research on Artificial Intelligence Applications in Higher Education – Where Are the Educators?," *International Journal of Educational Technology in Higher Education* 16, no. 1 (October 28, 2019): 39, doi:10.1186/s41239-019-0171-0.

[22] Andrew Feenberg, *Transforming Technology: A Critical Theory Revisited*, Im Kolophon: 2010 (New York, NY: Oxford Univ. Press, 2010).

[23] Holmes, Bialik, and Fadel, *Artificial Intelligence In Education*; Zawacki-Richter et al., "Systematic Review of Research on Artificial Intelligence Applications in Higher Education – Where Are the Educators?"

[24] Crompton and Burke, "Artificial Intelligence in Higher Education."

educational and moral goals. This reflects arguments by Crawford and Calo (2016) that ethical AI use requires human-centered judgment, and by Floridi and Cowls (2018) regarding principles of beneficence, justice, and explicability.[25] Here, AI serves not only as a tool but also as a medium for fostering reflective learning and value-based decision-making.

Across both orientations, lecturers adopt a balanced approach that blends innovation with responsibility. Those focused on productivity acknowledge ethical concerns, while those focused on ethics recognize AI's pedagogical advantages when used critically. Indonesian scholarship similarly notes that educators integrate digital tools to support learning while maintaining ethical boundaries and spiritual accountability.[26]

Overall, AI engagement in PTKIN is shaped less by disciplinary differences than by the interplay between practical needs and ethical reflection. This aligns with the *tawhidic* worldview, which seeks harmony between rational inquiry and moral consciousness.[27] In this context, responsible AI use involves both technical competence and ethical stewardship. Table 2 summarizes these shared tendencies and varied orientations, highlighting practice-based patterns rather than disciplinary classifications.

Table 2. Summary of Shared Patterns and Varied Orientations in AI Engagement

Aspect	Shared Patterns Across Lecturers	Variation in Orientations*
Perception of AI	AI is widely seen as inevitable and influential in academic work.	Emphasis may shift between technical usefulness and ethical implications.
AI Utilization	Used to support teaching, assessment, and material development.	Approaches range from efficiency-focused to reflection and creativity-focused.
Perceived Risks	Concerns include misuse, reduced effort, and academic integrity issues.	Focus may differ between technical risks and ethical or behavioral risks.
Risk Mitigation Strategies	All adopt measures to guide responsible student use.	Strategies vary from procedural controls to normative guidance and AI literacy.
Need for Regulation	General agreement on the importance of institutional policies.	Preferences differ between system-based and value-based regulatory approaches.
Value Orientation	Both support productive and responsible AI use.	Orientations range from efficiency and accuracy to character formation and moral awareness.

*These orientations are not tied to specific disciplines and often overlap in practice.

[25] Kate Crawford and Ryan Calo, "There Is a Blind Spot in AI Research," *Nature* 538, no. 7625 (October 20, 2016): 311–13, doi:10.1038/538311a; Luciano Floridi and Josh Cowls, "A Unified Framework of Five Principles for AI in Society," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, September 20, 2019), doi:10.2139/ssrn.3831321.

[26] Shindid Gunagraha, Salim Chayati, and Baidi Baidi, "Etika Penggunaan Kecerdasan Buatan Dalam Dunia Pendidikan Islam," *JENTRE* 6, no. 1 (July 3, 2025): 41–53, doi:10.38075/jen.v6i1.541; Nazih Sadatul Kahfi et al., "Artificial Intelligence in Islamic Religious Education: Balancing Learning Efficiency And Safeguarding Spiritual Integrity In Indonesian Higher Education," *INJECT (Interdisciplinary Journal of Communication)* 10, no. 1 (June 28, 2025): 643–60, doi:10.18326/inject.v10i1.4325.

[27] Masturin Masturin, Mhd Rasid Ritonga, and Siti Amaroh, "Tawhid-Based Green Learning in Islamic Higher Education: An Insan Kamil Character Building," *QIJIS (Qudus International Journal of Islamic Studies)* 10, no. 1 (July 29, 2022): 215–52, doi:10.21043/qijis.v10i1.14124.

2. Reframing COSO ERM in the Context of PTKIN

The COSO ERM framework is one of the most widely referenced models for organizational risk governance. Its eight components, which are internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring, offer a structured way to identify risks and design mitigation strategies.[28] Although the framework has been applied in higher education for financial management, accreditation, and institutional governance,[29] its use for addressing emerging technological risks, including AI, remains limited. This study does not assume COSO is automatically effective for AI; instead, it considers whether elements of the framework appear in lecturers' everyday responses to AI.

The findings show that several COSO components resonate with how PTKIN lecturers perceive and manage AI-related risks. Some lecturers tend to focus on event identification and control activities. Their concerns about maintaining the originality of student work lead them to use measures such as handwritten assignments or restricted access to digital tools. This pattern aligns with Humble's observation that technical controls often become the primary response to automated forms of academic misconduct.[30] Yet scholarship on AI ethics cautions that overreliance on technical restrictions may limit students' development of digital judgment.[31]

Other lecturers emphasize risk response and communication. Instead of prohibiting AI, they guide students to understand ethical boundaries and use AI responsibly. This reflects broader discussions on ethical AI literacy, which highlight the importance of explicit guidance and reflective dialogue. Studies on academic integrity in the era of generative AI also stress the need to combine formal regulations with value-based education.[32] However, the findings indicate that strategies grounded mainly in ethical appeals can create ambiguity when students interpret moral guidelines differently.

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[28] Mark Beasley, Bruce Branson, and Don Pagach, "An Analysis of the Maturity and Strategic Impact of Investments in ERM," *Journal of Accounting and Public Policy*, Special Issue on Accounting and Risk Management, 34, no. 3 (May 1, 2015): 219–43, doi:10.1016/j.jaccpubpol.2015.01.001.

[29] Engku Mohamad Engku Abdullah, Rubayah Yakob, and Hafizuddin-Syah B.A.M, "A Comprehensive Review of Enterprise Risk Management on Higher Education Institutions Performance," *Asia Proceedings of Social Sciences* 12 (March 24, 2024): 20–24, doi:10.31580/rf6td074.

[30] Niklas Humble, "Risk Management Strategy for Generative AI in Computing Education: How to Handle the Strengths, Weaknesses, Opportunities, and Threats?," *International Journal of Educational Technology in Higher Education* 21, no. 1 (December 11, 2024): 61, doi:10.1186/s41239-024-00494-x.

[31] Tigere Paidamoyo Muringa, "Exploring Ethical Dilemmas and Institutional Challenges in AI Adoption: A Study of South African Universities," *Frontiers in Education* 10 (September 1, 2025), doi:10.3389/feduc.2025.1628019.

[32] Rami Alsharefeen and Naji Al Sayari, "Examining Academic Integrity Policy and Practice in the Era of AI: A Case Study of Faculty Perspectives," *Frontiers in Education* 10 (June 26, 2025), doi:10.3389/feduc.2025.1621743; Zawacki-Richter et al., "Systematic Review of Research on Artificial Intelligence Applications in Higher Education – Where Are the Educators?"

In this context, the principles of *maqāṣid al-sharīʿah* offer a meaningful lens for expanding AI risk management at PTKIN. The core objectives of Islamic law, such as protecting religion, intellect, life, lineage, and property, provide an ethical foundation that can complement technical and managerial approaches. While conceptual parallels can be drawn between COSO and *maqāṣid al-sharīʿah*, developing a full theoretical integration is beyond this study's scope. Instead, the comparison reveals a gap between established risk-management frameworks and the value-based traditions shaping PTKIN's institutional identity. The findings also show that this potential alignment remains largely conceptual and has not yet been translated into concrete institutional practice.

Overall, AI risk mitigation at PTKIN continues to rely on technical measures and general ethical guidance, while religious normativity has not yet been incorporated into a formal or systematic framework. This ongoing tension between technical pragmatism and Islamic values sets the stage for the next section, which explores how these dynamics shape broader approaches to AI governance in PTKIN.

3. The Tension between Technical Practices and Religious Normativity

A key finding of this study is the clear gap between the AI risk mitigation strategies used by PTKIN lecturers and the religious normativity that shapes the institution's identity. Most strategies are pragmatic, relying on technical controls or general ethical guidance. Islamic values appear only at a declarative level and have not been translated into operational principles. This pattern aligns with studies showing that universities often respond to AI's negative impacts through practical measures rather than normative guidance. Common strategies such as preventing plagiarism,[33] validating information sources,[34] and enhancing students' technical skills[35] are rarely embedded in broader ethical frameworks.

Although discussions on responsible AI are growing, they tend to remain secondary to immediate practical needs. The emphasis lies primarily on ensuring that AI tools are used ethically and responsibly, yet such discussions rarely become the central focus.[36] The same

[33] Marija Stevkovska, "Redesigning Academic Writing Assignments in the Age of AI-Generated Content," in *Reimagining Intelligent Computer-Assisted Language Education* (IGI Global Scientific Publishing, 2025), 209–32, doi:10.4018/979-8-3693-4310-4.ch007.

[34] Krzysztof Walczak and Wojciech Cellary, "Navigating Risks: Inaccuracies, Bias, Disinformation, and Privacy in Educational AI," in *Teaching and Learning in the Age of Generative AI* (Routledge, 2025).

[35] Anabousy Ahlam et al., "Navigating AI Adoption: Challenges and Suggested Solutions for College Lecturers," in *2025 International Conference on Smart Learning Courses (SCME)*, 2025, 23–29, doi:10.1109/SCME62582.2025.11104880.

[36] Budur Turki Alshahrani, Salvatore Flavio Pileggi, and Faezeh Karimi, "A Social Perspective on AI in the Higher Education System: A Semisystematic Literature Review," *Electronics* 13, no. 8 (January 2024): 1572, doi:10.3390/electronics13081572; Ana Isabel Santos and Sandro Serpa, "Artificial Intelligence and Higher Education," in *Proc. Int. Conf. Res. Educ. Sci.*, vol. 9 (Proceedings of International Conference on Research in Education and Science, The International Society for Technology Education and Science, 2023), 1866–74; Maram Selmi, Nour El Houda Ben Fatma, and

pattern appears in this study. Differences in PTKIN lecturers' strategies seem linked to pedagogical orientation, technological familiarity, and perceived institutional expectations. Some rely on technical measures, such as manual exams and plagiarism detection, to maintain academic integrity, while others emphasize ethical reasoning by encouraging students to critically assess AI-generated content. However, neither approach is explicitly connected to Islamic principles.

This situation suggests that while PTKIN lecturers demonstrate ethical awareness, it has not evolved into an institutionalized religious foundation. Their practices are guided more by universal academic norms than by Islamic moral principles. This creates an opportunity to reflect on how religious values can be operationalized as practical guidelines for AI risk governance.

The integration of Islamic values is particularly relevant because PTKIN holds a unique position as a faith-based higher education institution.[37] . Islam functions not only as a spiritual system but also as a moral compass for individual and social behavior. Its values, rooted in the Qur'an and Sunnah, offer practical guidance for navigating technological change[38]. Islamic law provides a framework for evaluating technological progress through the principles of *maqāṣid al-sharīʿah* (the higher objectives of Islamic law).[39] These principles, formulated through centuries of scholarly reflection, assert that Sharia aims to protect five essential human needs: religion (*ḥifẓ al-dīn*), life (*ḥifẓ al-nafs*), intellect (*ḥifẓ al-ʿaql*), lineage (*ḥifẓ al-nasl*), and property (*ḥifẓ al-māl*).[40] This framework offers a valuable reference for balancing the benefits and harms of technology, ensuring that every advancement contributes to holistic human well-being.[41]

Meriem Chedly, "Artificial Intelligence in Higher Education: Literature Review," *La Tunisie Médicale* 103, no. 8 (August 1, 2025), doi:10.62438/tunismed.v103i8.5581.

[37] Alfan Rifai et al., "An Ethical Framework for AI in Islamic Education: Synthesizing Maqashid al-Sharia and National Legal Regulations in Indonesia," *Revista Electrónica de Ciencia Penal y Criminología* 27, no. 1 (October 15, 2025), https://revistacriminologia.com/manuscript/index.php/RECPC/article/view/99.

[38] Naif Rakan O. Alosaimi, Fakhrul Adabi Bin Abdul Kadir, and Ashraf Mohammed Zaidan, "The Concept of Values from A Quranic Perspective," *Quranica* 16, no. 2 Special Issue 12 (2024): 546–78.

[39] Muhammad Al-Tahir ibn Ashur, *Maqāṣid asy-Syarī'ah al-Islāmiyyah* (Wizārat al-Awqāf wa-l-Shu'ūn al-Islāmiyyah, 2004); Nour al-Din ibn Mukhtar al-Khadim, *'ilm maqāṣid al-syarī'ah* (Egypt: Maktabah Al-`Ubaykan, 2013).

[40] ibn Mukhtar al-Khadim, *'ilm maqāṣid al-syarī'ah*; ibid.

[41] Muhammad Safwan Harun et al., "The Concept of Al-Thawābit and Al-Mutaghayyirāt in Technological Innovation According to Maqāṣid al-Sharīʿah," *Millah: Journal of Religious Studies*, August 30, 2025, 573–610, doi:10.20885/millah.vol24.iss2.art1; Uthman Mohammed Mustapha Kannike and AbdulGafar Olawale Fahm, "Exploring The Ethical Governance of Artificial Intelligence from An Islamic Ethical Perspective," *Jurnal Fiqh* 22, no. 1 (June 30, 2025): 134–61, doi:10.22452/fiqh.vol22no1.5.

Embedding religious values into institutional regulation is essential for character formation, ethical responsibility, and socio-emotional development.[42] However, the findings of this study indicate that such integration is not yet reflected in AI mitigation strategies at PTKIN. There is an implicit recognition of the importance of grounding mitigation strategies in religious values, yet this awareness has not been translated into concrete policies or operational guidelines. Religious normativity exists primarily at the rhetorical level, while mitigation practices continue to follow a more universal technical and ethical logic. This situation reveals an institutional gap between PTKIN's religious identity and its academic practices.

Currently, PTKIN is operating at a pragmatic and somewhat sporadic level of AI risk control, without clear efforts to integrate religious values into risk governance. This is paradoxical to the ideal conception of Islamic education, which emphasizes the unity of knowledge, ethics, and faith.[43] The ultimate goal of Islamic education is to cultivate individuals who are not only knowledgeable but also virtuous and socially responsible.[44] Such formation requires a comprehensive approach encompassing theological, pedagogical, and institutional dimensions that are responsive to contemporary issues.[45] In other words, a shift in orientation can be observed: current AI mitigation practices at PTKIN more closely resemble those in general universities, while their faith-based distinctiveness remains underdeveloped.

This tension shows that the presence of religious values alone does not guarantee ethical integration into institutional practice. It requires intentional institutionalization so that ethical and spiritual principles inform AI risk governance. Achieving this would allow PTKIN to develop a distinctive model of AI ethics that balances pragmatic management with moral and spiritual integrity.

[42] Kurniawan Arizona et al., "Integrating Islamic Values and Local Wisdom into Science Education: Enhancing Character Development in Higher Education," *Ulumuna* 29, no. 1 (August 16, 2025): 398–428, doi:10.20414/ujis.v29i1.1308; P. Padmakumari et al., "Building Character Through Teaching Values: A Positive Youth Development Model for Student Engagement and Development," chapter, *Https://Services.Igi-Global.Com/Resolvedoi/Resolve.Aspx?Doi=10.4018/979-8-3373-0644-5.Ch015* (IGI Global Scientific Publishing, January 1, 1AD), building-character-through-teaching-values, doi:10.4018/979-8-3373-0644-5.ch015.

[43] Muhamad Restu Fauzi, Tasman Hamami, and Hyung-Jun Kim, "Islamic Religious Education Curriculum Innovation: Fethullah Gülen's Perspective," *Jurnal Pendidikan Agama Islam* 21, no. 1 (June 30, 2024): 186–200, doi:10.14421/jpai.v21i1.7089; Usman Usman, Bahraeni Bahraeni, and Nurhilaliyah Nurhilaliyah, "Exploring Islamic-Oriented Cooperative Learning through Faith-Driven Collaboration in among University Students in Islamic Education Courses," *International Journal of Learning, Teaching and Educational Research* 24, no. 9 (September 20, 2025), https://ijlter.org/index.php/ijlter/article/view/14320.

[44] Nuraan Davids and Yusef Waghid, *Ethical Dimensions of Muslim Education* (Cham: Springer International Publishing, 2016), doi:10.1007/978-3-319-29317-2; Fuadi Mardatillah et al., "Epistemological Reconstruction of Islamic Education: Developing a Transformative Pedagogical Model to Foster Creativity," *Jurnal Ilmiah Peuradeun* 13, no. 2 (May 30, 2025): 1071–94, doi:10.26811/peuradeun.v13i2.2200.

[45] Mardatillah et al., "Epistemological Reconstruction of Islamic Education."

4. Bridging Technical Risk and Islamic Normativity

This study highlights the tension between technically driven AI mitigation practices and the largely declarative use of Islamic values in PTKIN. Lecturers view AI both as a useful academic tool and as a risk to manual skills, critical thinking, and academic integrity, an ambivalence widely noted in global literature.[46] In PTKIN, however, these concerns are compounded by the absence of operationalized Islamic norms that could guide AI-related decisions.

National policy provides an important backdrop. The Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) has issued the Guidelines for the Use of Generative AI in Higher Education Learning (2024) to provide a framework for ethical and responsible AI utilization in academia. The document covers various aspects such as AI applications, ethical use, AI literacy, risk mitigation strategies, and considerations for choosing generative applications.[47] While this national framework provides a universal ethical foundation, it does not address the specific Islamic normative dimensions, such as *ḥifẓ al-dīn* and *ḥifẓ al-ʿaql*. Therefore, PTKIN has an opportunity to extend these universal guidelines by grounding them in the principles of *maqāṣid al-sharīʿah*.

In practice, AI mitigation at PTKIN remains shaped by individual judgement. Some lecturers rely on technical controls like handwritten exams, while others emphasize ethical guidance. Similar patterns appear in general higher education settings, where the absence of institutional regulation produces fragmented approaches.[48] However, this study demonstrates that within PTKIN, the absence of normative policy not only results in technical inconsistencies but also hinders the actualization of *maqāṣid al-sharīʿah* principles, particularly *ḥifẓ al-ʿaql* and *ḥifẓ al-dīn*, in AI governance.

Furthermore, Islamic ethics in academic practice tend to remain at a declarative level. Lecturers acknowledge the importance of Islamic values, especially the principles of honesty (*ṣidq*) and responsibility (*amānah*), yet there is no concrete mechanism to integrate these values into a comprehensive *maqāṣid*-based framework. For example, *ḥifẓ al-nafs* (protection of humanity) could support AI use that strengthens empathy and social interaction, while *ḥifẓ al-*

[46] Zawacki-Richter et al., "Systematic Review of Research on Artificial Intelligence Applications in Higher Education – Where Are the Educators?"

[47] Kemendikbudristek, *Panduan Penggunaan Generative Artificial Intelligence Pada Pembelajaran di Perguruan Tinggi* (Jakarta: Direktorat Pembelajaran dan Kemahasiswaan Direktorat Jenderal Pendidikan Tinggi, Riset, dan Teknologi Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2024).

[48] Muringa, "Exploring Ethical Dilemmas and Institutional Challenges in AI Adoption"; Oncioiu and Bularca, "Artificial Intelligence Governance in Higher Education."

māl (protection of property) could inform policies on copyright and originality. The gap between PTKIN's religious identity and its current risk practices therefore remains significant.[49]

Table 3 summarizes how COSO ERM elements could be aligned with *maqāṣid al-sharīʿah* to form a more integrative approach to AI governance in PTKIN.

Table 3. Conceptual Relationship between COSO ERM Components and *Maqāṣid al-Sharīʿah* Principles in AI Governance at PTKIN

COSO ERM Component	Objective in the Context of AI Risk	Relevant *Maqāṣid al-Sharīʿah* Principle	Potential Implementation at PTKIN
Risk Identification	Identifying threats such as plagiarism, bias, and loss of critical thinking skills.	*ḥifẓ al-ʿaql* (protection of intellect)	Embedding critical AI literacy to prevent students from becoming passive users of AI outputs.
Risk Assessment	Evaluating the extent to which AI disrupts academic integrity and honesty.	*ḥifẓ al-dīn* (protection of faith)	Developing ethics policies grounded in Islamic moral values.
Risk Response	Determining actions against AI misuse.	*ḥifẓ al-nafs* (protection of humanity)	Encouraging AI applications that enhance empathy and social responsibility.
Control Activities	Implementing measures such as manual exams, reference verification, and plagiarism detection.	*ḥifẓ al-māl* (protection of property and intellectual rights)	Using AI detection tools to safeguard copyright and academic originality.
Monitoring & Communication	Evaluating AI use effectiveness and promoting ethical awareness.	*ḥifẓ al-nasl* (protection of future generations)	Integrating AI ethics discourse into the curriculum to foster an ethically grounded generation.

The implications of this study unfold across three areas. First, at the theoretical level, it extends the use of the COSO ERM framework into Islamic higher education. COSO has largely been applied in corporate and general organizational settings.[50] By adapting it to PTKIN, this study demonstrates that the framework is insufficient if limited to technical matters. It needs to be complemented by Islamic normative principles to support both academic and moral objectives. Second, at the practical level, the findings point to the need for institutional guidelines on AI use at PTKIN. These guidelines should not simply replicate models from other universities but should incorporate Islamic values so that AI governance reflects PTKIN's

[49] Fatima Ali et al., "Islamic Ethics and AI: An Evaluation of Existing Approaches to AI Using Trusteeship Ethics," *Philosophy & Technology* 38, no. 3 (August 9, 2025): 120, doi:10.1007/s13347-025-00922-4; Kannike and Fahm, "Exploring The Ethical Governance of Artificial Intelligence from An Islamic Ethical Perspective."

[50] Engku Abdullah, Yakob, and B.A.M, "A Comprehensive Review of Enterprise Risk Management on Higher Education Institutions Performance"; Bamber and Elezi, "Enterprise-Wide Risk Management in Higher Education."

religious mission. Third, from a socio-religious standpoint, the study positions PTKIN as a potential contributor to global discussions on AI ethics. While many universities rely on technical rules and universal ethical standards, PTKIN can develop a faith-based AI ethics framework that strengthens moral legitimacy and offers a distinctive contribution.

Overall, this study highlights the persistent tension between pragmatic mitigation strategies and normative religious foundations. By illuminating this tension, the research opens new space for discourse on how AI within PTKIN should not only be understood as a technical or ethical issue but also as a normative one deeply tied to the institution's religious identity. Consequently, PTKIN hold the potential to become pioneers of faith-based AI ethics in Indonesia, provided that Islamic values are genuinely institutionalized into policies and practices rather than remaining at the rhetorical level.

C. Conclusion

This study demonstrates that PTKIN lecturers hold diverse perceptions regarding the use of AI, yet these differences do not follow disciplinary boundaries. Instead, individual orientations shape how lecturers interpret AI-related risks. Some focus more on technical issues such as accuracy, plagiarism, and verification, while others emphasize ethical and cognitive aspects including academic integrity and critical reasoning. Despite these differences, AI mitigation practices remain individual and are not yet supported by comprehensive institutional policies. Islamic values that should underpin PTKIN's ethical foundation have not yet been operationalized, making the current mitigation strategies more pragmatic than normative. The analysis using the COSO ERM framework reveals that while the elements of risk identification, response, and monitoring are present, they have not been fully integrated with *maqāṣid al-sharīʿah* principles, including *ḥifẓ al-dīn*, *ḥifẓ al-ʿaql*, *ḥifẓ al-nafs*, *ḥifẓ al-nasl*, and *ḥifẓ al-māl,* which could serve as a conceptual basis for balancing technical control with spiritual and moral values. Therefore, PTKIN holds great potential to become a pioneer in developing Islam-based AI ethics, provided that religious values are genuinely institutionalized into policy and risk governance practices.

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