

## CRITICAL INTEGRATION OF ARTIFICIAL INTELLIGENCE IN ISLAMIC EDUCATION IN ASEAN: A THEORETICAL CRITICAL ANALYSIS

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### ABSTRACT

**Purpose** – This article aims to critically examine the integration of Artificial Intelligence (AI), particularly generative AI, into Islamic education within the ASEAN region, which is characterized by cultural, religious, and infrastructural diversity. The analysis focuses on how AI adoption potentially reconfigures pedagogical authority and educators' moral, while simultaneously challenging the spiritual mission of Islamic education rooted in the principles of *tarbiyah*, *ta'dib*, and *tazkiyah*.

**methods** – This study employs a qualitative, literature-based, and normative-critical approach. The analysis is developed through a philosophical synthesis of Islamic educational thought, critical educational theory, and contemporary AI ethics. It centers on three interrelated issues: the shift of pedagogical authority from educators to algorithmic systems, the risk of dehumanization and instrumentalization of learning processes, and the urgency of developing value-driven AI literacy.

**Findings** – The findings indicate that AI integration without a clear ethical framework risks reducing educators to mere technological operators and instrumentalizing learning. To address these concerns, the article proposes a human-centered AI framework tailored to Islamic education in ASEAN through the formulation of an operational triadic model of ethical AI literacy: *verification* (critical evaluation of AI outputs), *value reflection* (moral and spiritual reflection), and *academic transparency* (ethical disclosure and integrity in AI use). This model translates normative ethical principles into concrete pedagogical practices without requiring large-scale curriculum reform.

**Research implications**– Theoretically, this study contributes to ongoing debates on AI and education by foregrounding moral and pedagogical dimensions as central analytical concerns. Practically, it offers context-sensitive insights for educators, institutions, and policymakers across ASEAN. However, the study is limited by its conceptual nature and does not include empirical validation in classroom or institutional settings.

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## Introduction

Artificial Intelligence (AI) has become an increasingly influential force in contemporary education, not only as a technological tool but also as a system that shapes how knowledge is produced, assessed, and distributed. Through mechanisms such as algorithmic personalization, automated evaluation, and generative models, AI influences pedagogical processes and educational decision-making. In global policy discourse, AI is often presented as a necessary instrument for improving efficiency, scalability, and data-driven governance in education (UNESCO, 2023). However, critical studies argue that this dominant narrative tends to overlook the epistemological and ethical implications of AI, particularly its impact on authority, human agency, and educational values (Binns, 2018; Waditwar, 2024; Yan, 2025).

These concerns are especially relevant in the ASEAN region, where educational systems operate within diverse social, cultural, and political contexts. Differences in digital infrastructure, regulatory capacity, and educational traditions have resulted in uneven patterns of AI adoption across ASEAN member states. Islamic educational institutions such as pesantren, madrasahs, and Islamic universities are increasingly engaging with AI through national digitalization programs, commercial educational platforms, and the informal use of generative AI by students. This situation makes ASEAN a critical context for examining how AI interacts with value-based educational systems.

From the perspective of Islamic educational theory, education is not a value-neutral activity. Knowledge is understood as ethically grounded, and education (*tarbiyah*) is closely linked to moral formation (*ta'dib*) and spiritual development (*tazkiyah*). Pedagogical authority is relational and embodied in the educator as *murabbi*, *mu'allim*, and *mu'addib*. This conception differs fundamentally from dominant AI paradigms, which are based on computational rationality and instrumental optimization. Critical educational theory warns that when instrumental rationality dominates educational practice, learning risks being reduced to technical performance and measurable outcomes, at the expense of ethical reasoning and human judgment.

The expansion of generative AI in education intensifies this tension. Generative systems can produce explanations and evaluations that appear authoritative, potentially reshaping how learners perceive knowledge and expertise. In Islamic education, where epistemic trust and moral accountability are central, reliance on AI-generated content raises important theoretical questions. These include the distribution of epistemic authority in AI-mediated learning environments and the allocation of moral responsibility between human educators and algorithmic systems that lack intentionality.

Current research on AI in Islamic education has primarily focused on technical and functional benefits, such as adaptive learning and increased access (Muchlis, 2025; Yanti, 2024). Other studies highlight ethical risks, including algorithmic bias, dehumanization, and challenges to academic integrity (Faizarrobby et al., 2025). Despite these contributions, existing literature remains fragmented and often lacks a coherent theoretical framework that integrates Islamic educational philosophy with critical analyses of AI as a socio-technical system. In particular, pedagogical authority and moral agency have not been systematically examined, especially within the ASEAN context.

This article addresses these gaps by offering a critical theoretical analysis of AI integration in Islamic education across ASEAN. The study focuses on pedagogical authority and moral agency as key analytical categories, shifting the discussion beyond questions of technological effectiveness toward an examination of how AI reshapes

educational values, authority structures, and responsibility.

The article makes three main contributions. First, it develops an integrated theoretical framework that connects Islamic educational thought, critical educational theory, and contemporary AI ethics. Second, it introduces the concept of ethical AI literacy as a pedagogical approach that emphasizes epistemic evaluation, ethical reflection, and academic responsibility in the use of AI. Third, by situating the analysis in the ASEAN region, the study demonstrates that ethical challenges related to AI are shaped more by institutional and cultural factors than by technological capability alone.

The article is structured as follows. The first section outlines the theoretical framework. The second section analyzes the implications of AI for pedagogical authority and moral agency in Islamic education across ASEAN. The final section discusses educational and policy implications. The main conclusion argues that the sustainable integration of AI in Islamic education depends on maintaining human-centered pedagogical authority and embedding ethical literacy within digital transformation processes.

## Methods

This study uses a qualitative, critical theoretical design with a conceptual and normative orientation. It does not test the effectiveness of particular AI tools; instead, it examines how AI reshapes epistemic authority, moral agency, and educational purpose in Islamic education across ASEAN. The framework synthesizes (1) critical educational theory to analyze instrumental rationality, power relations, and shifts in pedagogical authority; (2) Islamic educational philosophy as the normative basis, drawing on *murabbi*, *mu'allim*, *mu'addib*, *adab*, and *maqasid al-shariah*; and (3) contemporary AI ethics to evaluate bias, accountability, transparency, and human agency.

Data consist of peer-reviewed journal articles, scholarly books, and policy reports (2018–2025), selected purposively across AI in education, Islamic pedagogy, and digital ethics, prioritizing ASEAN-focused studies and UNESCO documents. Analysis proceeded through thematic mapping, critical interrogation of dominant AI narratives, and ethical assessment using *maqasid al-shariah*. Rigor was supported through theoretical triangulation and transparent selection criteria. The output is an analytical generalization, yielding a transferable triadic model of ethical AI literacy: epistemic verification, value reflection, and academic transparency.

## Result

### 1.1 Transformation of Pedagogical Authority

The analysis reveals a structural reconfiguration of pedagogical authority as AI systems increasingly mediate educational processes. In classical Islamic education, authority is relational, ethical, and embodied, grounded in the educator's role as *murabbi*, *mu'allim*, and *mu'addib*. Authority is exercised through moral exemplarity, dialogical transmission of knowledge, and the cultivation of *adab*, rather than through procedural or technical control (Al-Attas, 1999; Halstead Mark, 2004). This conception contrasts sharply with the logic of AI-driven educational systems, which relocate authority to algorithmic outputs, predictive analytics, and automated feedback. From a Weberian perspective, this shift reflects the expansion of instrumental rationality (*Zweckrationalität*), in which authority is derived from calculability, efficiency, and technical reliability rather than ethical legitimacy

(Funk, 2020; Kalberg, 2010; Weber, 1978). In algorithmic systems, pedagogical authority becomes embedded in procedures and models rather than human judgment. Habermas's distinction between communicative rationality and system rationality further clarifies this transformation. AI-mediated education privileges system rationality, where learning processes are governed by efficiency and performance metrics, thereby constraining the communicative space in which educators exercise normative authority through dialogue and ethical reasoning (Habermas Jurgen, 1984). From an Islamic pedagogical standpoint, this displacement is deeply problematic, as pedagogical authority is inseparable from moral responsibility (*amanah*) and intentional guidance (*niyyah*), capacities that algorithmic systems cannot possess (Ruckenstein, 2023). Consequently, uncritical reliance on AI-generated outputs risks eroding the educator's ethical and epistemic role.

### **1.2 Dehumanization and Instrumentalization of Learning**

The findings further indicate that AI-mediated education reinforces an instrumental conception of learning. Educational processes are increasingly operationalized through measurable indicators such as efficiency, accuracy, and performance optimization. While such mechanisms may enhance administrative governance, they exemplify what Weber described as the “iron cage” of rationalization, in which human practices are subordinated to technical control and calculative logic (Weber, 1978). From the perspective of critical theory, particularly Habermas, this process represents a colonization of the lifeworld by system imperatives. Educational practices that should be oriented toward meaning-making, ethical deliberation, and intersubjective understanding become governed by technical criteria embedded in algorithmic systems (Meyer, 2024; Prashant Mahajan, 2025). As dialogical engagement diminishes, opportunities for moral reasoning and reflective learning are correspondingly reduced (Meyer, 2024)

Within Islamic educational philosophy, this instrumentalization conflicts with the normative aims of education, which emphasize moral formation (*akhlaq*), spiritual growth, and ethical discernment (*tazkiyah al-nafs*) (Akrim, 2023; Al-Attas, 1999; Kobandaha et al., 2023; Qasserras & Information, 2024). Education is intended to cultivate the holistic human being (*insan kamil*), not merely to optimize cognitive or behavioral performance. When learning is reduced to content consumption and metric-based evaluation, moral responsibility and social consciousness risk being marginalized, reshaping the ethical horizon of education itself (Gantiolersonja et al., 2023).

### **1.3. Ethical AI Literacy as a Strategic Response**

In response to these challenges, the analysis advances ethical AI literacy as a strategic and normative pedagogical response. Drawing on Habermasian theory, ethical AI literacy seeks to reassert communicative rationality within AI-mediated learning environments by fostering critical engagement, ethical dialogue, and reflective judgment in relation to algorithmic systems (HEUNG et al., 2025). Rather than rejecting AI, this approach positions technology within a framework of human-centered deliberation. From an Islamic normative perspective, ethical AI literacy is grounded in *maqasid al-shariah* as articulated by contemporary scholars, emphasizing the protection of intellect (*hifz al-'aql*), faith (*hifz al-din*), human dignity (*karamah insaniyyah*), and moral responsibility (Habib, 2025; Ma'rifatun Nikmah et al., 2025; Mustapha et al., 2025; Riri Fitri Sari & Priyatna, 2024). Ethical AI literacy operationalizes these objectives through three interrelated dimensions: epistemic verification of AI-generated knowledge, value-based reflection rooted in Islamic ethics, and academic transparency in human–AI interaction (Budiman et al., 2024; Falah & Achfama, 2026; Irfan & Zulkifli, 2025; Pohan & Nasution,

2025). By integrating critical theory with maqasid reasoning, ethical AI literacy enables educators and learners to treat AI as a pedagogical instrument rather than an epistemic authority.

This strategy preserves human pedagogical authority while allowing responsible technological engagement. In doing so, it aligns digital transformation with the ethical telos of Islamic education and resists the reduction of learning to purely instrumental rationality (Roshanaei et al., 2023; Williamson, 2023).

## Discussion

By integrating critical theory with maqasid reasoning, ethical AI literacy reframes AI as a pedagogical instrument rather than an epistemic authority. This directly supports the study's working hypothesis that AI-mediated education risks relocating epistemic authority from relational teacher student interaction to algorithmic outputs, and that such relocation requires an explicit normative counterweight. This interpretation aligns with UNESCO's human-centred guidance on generative AI, which emphasizes safeguarding human agency and ensuring that AI supports rather than replaces educational judgment and intellectual development (UNESCO, 2023). It also resonates with UNESCO's AI competency frameworks, which position ethical understanding and agency as core competencies for both teachers and students in the AI era (UNESCO, 2024).

From a critical-theoretical standpoint, the findings extend earlier concerns that AI in education is not merely a technical enhancement but part of broader shifts toward automated governance and data-driven rationalization. In this sense, the results reinforce critical scholarship arguing that AI systems can intensify instrumental logics in education, prioritizing optimization, prediction, and measurable outcomes, thereby narrowing educational purposes and constraining dialogical, value-laden pedagogical spaces (Mansur, 2025; Takona, 2024). Interpreted through Weber's account of rationalization, AI-enabled performance metrics and automated feedback can operate as mechanisms that normalize calculability as "good education," increasing the risk that education is evaluated primarily through efficiency and technical performance rather than moral and civic aims (Weber, 1978)

Importantly, the proposed emphasis on ethical AI literacy also speaks to current research trends in AI literacy that increasingly define literacy as more than technical capability. Recent systematic reviews show that AI literacy is being reconceptualized to include ethical discernment, social implications, and responsible use, yet ethical dimensions remain underprioritized and unevenly implemented across educational contexts (Harahap et al., 2025; Ranieri, 2025; Tondowala et al., 2023). Our findings build on this trajectory by specifying a value-based literacy approach tailored to Islamic education, where epistemic trust, accountability, and moral formation are constitutive aims rather than peripheral concerns. In other words, ethical AI literacy is not an "add-on" but a necessary condition for aligning AI practices with normative educational ends (Nurhaliza, 2025; Sitheeqe & Mohamed, 2024; Stolpe & Hallstr, 2024; UNESCO, 2024).

In the broadest context, this discussion contributes to ongoing debates about cultural and ethical pluralism in AI governance. Ethical frameworks for AI have often been criticized for privileging Eurocentric assumptions, motivating calls for pluralist benchmarking that draws on diverse moral traditions. From this perspective, maqasid-guided reasoning offers a rigorous normative lens for evaluating AI practices through

objectives such as the protection of intellect, dignity, and moral responsibility, thereby strengthening culturally grounded but globally legible ethical evaluation (Habib, 2025). This supports the study's working hypothesis that ethical tensions in AI-mediated Islamic education are not solely technical problems (e.g., bias or accuracy) but also governance and value-alignment problems, namely, whether institutional digital transformation remains anchored in human accountability and moral purpose (Habib, 2025; UNESCO, 2023).

### Implications

Taken together, the findings imply that the sustainability of AI integration in Islamic education depends on designing institutional practices that preserve (1) human pedagogical authority, (2) communicative and deliberative learning spaces, and (3) transparent accountability for AI use. Ethical AI literacy operationalized through epistemic verification, value reflection, and academic transparency functions as a practical bridge between normative commitments and classroom governance, preventing AI from becoming a de facto epistemic authority while still enabling responsible educational innovation (UNESCO, 2023, 2024).

### Conclusion

This study argues that the integration of Artificial Intelligence in Islamic education cannot be approached as a merely technical or managerial matter. AI operates as an epistemic and normative force that shapes how knowledge, authority, and responsibility are understood in educational practice. The central challenge, therefore, lies not in the substitution of human teachers but in the risk of transferring pedagogical authority from morally accountable educators to impersonal algorithmic systems. Such a shift is incompatible with the Islamic understanding of education, in which *tarbiyah* is inseparable from *adab*, *akhlaq*, and spiritual formation.

The framework of ethical AI literacy proposed in this study offers a normative orientation for resisting this displacement. By emphasizing epistemic verification, value-based reflection, and academic transparency, the framework affirms human judgment and moral agency as the foundation of educational practice. Within this view, AI may serve as an instrument that supports learning, but it must remain subordinate to ethical deliberation and pedagogical responsibility.

Ultimately, the study contends that the ethical legitimacy of AI in education depends on preserving the primacy of human authority and moral purpose. Technological innovation is meaningful only insofar as it remains oriented toward the cultivation of intellect, dignity, and responsibility, the enduring ethical *telos* of Islamic education.

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