

Santri and AI: Ethical Reflections On Islamic Learning Through Az-Zarnuji's *Ta'limul Muta'allim*

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Abstract: The rapid development of artificial intelligence (AI) has significantly transformed the education landscape, including within traditional Islamic institutions. This conceptual study examines the ethical implications of AI-based Islamic learning, particularly through the lens of *Ta'limul Muta'allim*, a classical pedagogical text by Az-Zarnuji widely revered in *Pesantren* traditions. Using textual analysis, the study critically analyzes the principles of Islamic learning, such as the sanctity of the teacher-student relationship, the role of sincerity (*ikhlas*), and the etiquette of knowledge-seeking (*adab*)—in contrast to the mechanized, impersonal features of AI-driven education. The paper also reviews contemporary scholarly works on AI and its intersection with religious pedagogy. The findings reveal that while AI offers potential for accessibility and scalability in Islamic learning, it challenges spiritual integrity, traditional epistemology, and ethical values. Consequently, this study bridges classical Islamic ethics and modern educational technology. Finally, it proposes a normative framework for AI usage in Islamic education that remains faithful to the ethical spirit of Az-Zarnuji's teachings.

Keywords: Artificial Intelligence, Islamic Education, *Ta'limul Muta'allim*, and Ethics in Pedagogy

Introduction

Over the past two decades, the rapid advancement of artificial intelligence (AI) has significantly transformed various aspects of human life, including education.¹ These innovations have gradually permeated traditional Islamic educational institutions such as madrasahs and pesantren.² Numerous digital platforms now feature AI-assisted tafsir sessions,³ machine-generated fatwas,⁴ and automated religious Q&A services.⁵ While such developments enhance efficiency and accessibility, they also expose a critical gap between Islamic education's spiritual and transformative aims and the mechanistic, impersonal nature of AI technologies.⁶ This discrepancy reveals an underexplored intersection—particularly concerning internalizing religious values, the sanctity of teacher-student relationships, and the *adab* (ethical conduct) integral to Islamic pedagogy.

In the context of pesantren, where *santri* (students) are educated not only to master Islamic texts but also to undergo profound moral and spiritual formation, the application of AI warrants ethical and epistemological scrutiny. This formation is traditionally cultivated through an intimate bond with the *kiai* (religious scholar), who embodies *adab* and spiritual authority within *halaqah* (study circles). While various studies acknowledge the potential of technology to expand access to Islamic education,⁷ many fall short in addressing the dimension of value internalization and spirituality.⁸ For instance, Al-Salman (2022) warns against the “desacralization” of knowledge transmitted through automated systems lacking legitimate scholarly authority. In the pesantren ecosystem, this raises concerns about the diminishing role of the *kiai*, which is replaced by algorithmic authority devoid of moral and spiritual accountability.

¹ Nicolae Moroianu, Silvia-Elena Iacob, and Alexandra Constantin, “Artificial Intelligence in Education: A Systematic Review,” in *Geopolitical Perspectives and Technological Challenges for Sustainable Growth in the 21st Century*, by Alina Mihaela Dima and Vanesa Madalina Vargas (Scienco, 2023), 906–21, <https://doi.org/10.2478/9788367405546-084>.

² M Agus Salim and Nurlaila Rajabiyah, “Impact of Artificial Intelligence on Islamic Education: Effectiveness, Innovation, and Socio Cultural Influence,” *Advances Educational Innovation* 1, no. 3 (February 10, 2025): 101–12, <https://doi.org/10.69725/aei.v1i3.185>.

³ “AI and the Quran: Smarter Learning and Recitation,” accessed May 7, 2025, <https://meemacademia.com/ai-and-the-quran-a-smarter-way-to-learn-and-recite/>.

⁴ Siti Farahiyah Ab Rahim et al., “Artificial Intelligence for Fatwa Issuance: Guidelines And Ethical Considerations,” *Journal of Fatwa Management and Research* 30, no. 1 (January 17, 2025): 76–100, <https://doi.org/10.33102/jfatwa.vol30no1.654>.

⁵ “Faith Questions Apps | Theological Answers,” May 6, 2025, <https://faith.tools/questions>.

⁶ Andri Nirwana An et al., “SWOT Analysis of AI Integration in Islamic Education: Cognitive, Affective, and Psychomotor Impacts,” *Qubahan Academic Journal* 5, no. 1 (March 4, 2025): 476–503, <https://doi.org/10.48161/qaj.v5n1a1498>.

⁷ Winda Restalia and Nur Khasanah, “Transformation of Islamic Education in the Digital Age: Challenges and Opportunities,” *Tadibia Islamika* 4, no. 2 (January 2, 2025): 85–92, <https://doi.org/10.28918/tadibia.v4i2.8964>.

⁸ Gabriel Fernandez-Borsot, “SPIRITUALITY AND TECHNOLOGY: A THREEFOLD PHILOSOPHICAL REFLECTION,” *Zygon: Journal of Religion and Science* 58, no. 1 (March 2, 2023), <https://doi.org/10.1111/zygo.12835>; Kiran Bhagwandas et al., “A Systematic Review of Spirituality Tools Based on Psychometric Qualities and Recommendations for Future Research,” *Journal of Religion and Health* 64, no. 2 (April 2025): 1257–75, <https://doi.org/10.1007/s10943-024-02220-3>.

This study addresses that gap by employing the classical work *Ta'limul Muta'allim* by Az-Zarnuji as an ethical lens to reflect upon AI-based Islamic learning for *santri*. For centuries, this seminal text has served as a cornerstone in *Pesantren* education, advocating fundamental principles such as sincerity (*ikhlas*) in seeking knowledge, reverence for teachers, the cultivation of *adab*, and the pursuit of *barakah* (blessing) in the learning process. Through a library-based study, this research analyzes the tension between these enduring values and the emerging realities of AI-enhanced learning systems. The relevance of *Ta'limul Muta'allim* in this context is not merely historical; it offers a normative ethical framework that can guide contemporary Islamic education amidst the proliferation of intelligent machines.

The core problem addressed in this study is timely and crucial: how can the spiritual integrity, ethical comportment, and blessing traditionally sought in Islamic education be preserved in an era of AI-driven digitalization? Given the lack of ethical studies connecting classical Islamic educational traditions to contemporary technological challenges, this research significantly enriches the discourse on Islamic pedagogy. It informs value-based educational policymaking in the digital age.

Research Methodology

This qualitative conceptual study employs a structured conceptual analysis through the library research method, conducted between January and March 2025 in Surabaya, Indonesia. The research aims to explore ethical reflections on AI-based Islamic learning for *santri* by examining the classical educational text *Ta'limul Muta'allim* by Az-Zarnuji.

The primary object of analysis is a textual corpus—both classical and contemporary—selected for its relevance to Islamic pedagogy, ethical principles, and the evolving role of artificial intelligence in education. Data was collected through an in-depth review of primary sources such as *Ta'limul Muta'allim*, alongside secondary literature including peer-reviewed journal articles, scholarly books, and digital reports addressing AI and Islamic education.

The data were analyzed using content analysis techniques, with attention to identifying core ethical values, modes of educational interaction, and the tensions between traditional Islamic pedagogical ideals and AI-driven learning systems. The presentation of findings follows a descriptive-analytical format, emphasizing critical comparison and normative synthesis to construct ethical propositions.

Methodologically, the study combines rational inquiry (based on logical reasoning), empirical grounding (through documented textual evidence), and a normative-ethical perspective. This approach allows for the articulation of value-based reflections aligned with the moral-spiritual objectives of classical Islamic education within the context of contemporary technological transformation.

Results and Discussion

The Classical Islamic Educational Ethos in *Ta'limul Muta'allim*

Burhanuddin al-Zarnuji's *Ta'limul Muta'allim* is one of the most influential classical texts in the Islamic educational tradition. More than a didactic manual, it offers a moral-spiritual framework that defines the ethos of learning in Islamic contexts. As intelligent

machines increasingly permeate the global educational landscape, including in traditional Islamic institutions such as *Pesantren*, the ethical and pedagogical values enshrined in this text demand renewed attention. This study reveals that the educational philosophy of *Ta'limul Muta'allim* provides a normative and ethical critique of the mechanization of learning through artificial intelligence, especially when it concerns the formation of *santri*, or students in Islamic boarding schools.

Al-Zarnuji articulates that the ultimate goal of acquiring knowledge is not worldly gain, prestige, or employment, but rather the pursuit of divine pleasure and social benefit.⁹ The core value of sincerity (*ikhlas*) is central to the entire educational process, and it is intricately linked with humility (*tawadhu'*) and the quest for *barakah* (blessing) in knowledge. In contrast, despite its computational capacity, AI lacks moral consciousness, intention, and spiritual orientation.¹⁰ Therefore, the integration of AI into Islamic learning environments must be critically evaluated to ensure it does not displace the spiritual objectives of education but serves as a tool that supports them.

Equally significant is the teacher-student relationship, which al-Zarnuji places at the heart of effective Islamic pedagogy. He underscores the importance of etiquette (*adab*), not merely as a form of respect, but as an essential component of ethical and spiritual growth.¹¹ Students are expected to internalize not only the intellectual content imparted by the teacher but also their moral disposition and spiritual demeanor. AI cannot replicate such relational dynamics and is inherently devoid of emotional intelligence and ethical embodiment. Thus, while AI may facilitate access to information, it cannot supplant the formative human presence of a teacher, whose guidance remains indispensable in the ethical cultivation of the student.¹²

The text also provides a detailed learning methodology, emphasizing the selection of beneficial knowledge, consistency in study, repetition, collaborative dialogue, note-taking, and reflective practice. These methods reflect a holistic and active approach to learning, grounded in discipline, endurance, and social interaction. AI can serve a complementary function within this framework, such as offering access to diverse sources

⁹ Iswan Fadlin and Maragustam Siregar, "Pemikiran Imam Al-Zarnuji Tentang Pendidikan Islam Dan Relevansinya Dengan Pendidikan Islam Kontemporer," *JURNAL SEUMUBEUET: JURNAL PENDIDIKAN ISLAM* 3, no. 1 (2024).

¹⁰ Mark Ryan, "In AI We Trust: Ethics, Artificial Intelligence, and Reliability," *Science and Engineering Ethics* 26, no. 5 (October 2020): 2749–67, <https://doi.org/10.1007/s11948-020-00228-y>; Patrick Schenk, Vanessa Müller, and Luca Keiser, "Social Status and the Moral Acceptance of Artificial Intelligence," *Sociological Science* 11 (2024): 989–1016, <https://doi.org/10.15195/v11.a36>; Evandro Barbosa and Thais Alves Costa, "The Heart of an AI: Agency, Moral Sense, and Friendship," *Filosofia Unisinos* 25, no. 1 (March 26, 2024): 1–16, <https://doi.org/10.4013/fsu.2024.251.11>.

¹¹ Raisa Zuhra Salsabila Awaluddin, "PEMIKIRAN PENDIDIKAN ISLAM AL-ZARNUJI DAN RELEVANSINYA DENGAN PENDIDIKAN ISLAM KONTEMPORER," *TAUJIH: Jurnal Pendidikan Islam* 5, no. 02 (January 2, 2024): 22–39, <https://doi.org/10.53649/taujih.v5i02.513>.

¹² Andy Nguyen et al., "Ethical Principles for Artificial Intelligence in Education," *Education and Information Technologies* 28, no. 4 (April 2023): 4221–41, <https://doi.org/10.1007/s10639-022-11316-w>; Cecilia Ka Yuk Chan and Louisa H.Y. Tsi, "Will Generative AI Replace Teachers in Higher Education? A Study of Teacher and Student Perceptions," *Studies in Educational Evaluation* 83 (December 2024): 101395, <https://doi.org/10.1016/j.stueduc.2024.101395>; Cecilia Ka Yuk Chan and Louisa H. Y. Tsi, "The AI Revolution in Education: Will AI Replace or Assist Teachers in Higher Education?" (arXiv, 2023), <https://doi.org/10.48550/ARXIV.2305.01185>.

or enabling personalized review mechanisms. Still, it must be integrated in ways that preserve the core human effort and intentionality required in the learning process.

This analysis suggests a novel contribution by revisiting classical Islamic educational ethics in light of contemporary technological advancements. Rather than rejecting AI through a defensive traditionalism, this study proposes an ethical-critical lens for discerning its use in Islamic education. Al-Zarnuji's text emerges not as an anachronistic manual but as a timeless moral compass. It reminds us that knowledge is not merely data, that the teacher is more than a transmitter of content, and that learning is a spiritual journey toward human excellence. Consequently, any AI-based educational reform in the *Pesantren* context must be designed to enhance, not erode, these enduring values. Only by rooting innovation in ethical tradition can Islamic education remain relevant and spiritually grounded in the era of intelligent machines.

Ethical Tensions between AI Learning and Classical Islamic Pedagogy

Integrating artificial intelligence in Islamic educational settings—particularly within traditional institutions such as *Pesantren*—necessitates critical examination through the ethical lens of classical Islamic pedagogical texts. Among the most enduring references in this regard is *Ta'limul Muta'allim* by Az-Zarnuji. This seminal work codifies the epistemological and ethical foundations of the teacher-student relationship in Islam. From Az-Zarnuji's perspective, teaching is not merely a transactional transfer of knowledge but a profoundly spiritual and interpersonal engagement. The teacher (*mu'allim*) is not only a source of information but a moral exemplar, a conduit for barakah (divine blessing), and a figure through whom the values of sincerity (*ikhlas*), humility (*tawadhu'*), and proper conduct (*adab*) are transmitted experientially. In this framework, the possibility of AI replacing the teacher is inherently problematic, not due to technological limitations per se, but because AI lacks the moral subjectivity and spiritual intentionality foundational to the Islamic conception of pedagogy.

The increasing adoption of AI-based platforms for religious learning poses significant challenges to the personalization and spiritual depth traditionally expected in Islamic education. While AI can deliver structured content efficiently and adapt to cognitive preferences, it remains incapable of fostering the transformative ethical formation central to the *ta'dib*-oriented model emphasized by Az-Zarnuji. He believes knowledge must be pursued with sincerity and accompanied by moral refinement—a process cultivated through close human mentorship. As an impersonal entity, AI lacks emotional intelligence, spiritual intuition, and the ability to discern subtle dimensions of a student's moral and psychological development. Furthermore, the absence of mutual *niyyah* (intention) between teacher and student in AI-mediated learning strips the educational process of its metaphysical dimensions, thereby narrowing its purpose to cognitive efficiency rather than holistic human formation.

A more insidious risk is the potential dehumanization of the learning process, where AI systems standardize and automate pedagogical interactions, leading to the erosion of ethical sensitivity and the collapse of *adab*.¹³ In Az-Zarnuji's paradigm, *adab* is not an

¹³ Nadia Ghalia et al., "Impact of Artificial Intelligence in Education: Insights from Students and Faculty Members at Yarmouk University," *Journal of Ecohumanism* 3, no. 8 (November 18, 2024), <https://doi.org/10.62754/joe.v3i8.4807>; Hye-young Kim and Ann L. McGill, "AI-induced Dehumanization.

auxiliary value but a constitutive element of learning. It is cultivated through embodied interactions—eye contact, tone of voice, patience, and the teacher's moral character¹⁴—that AI cannot replicate. As AI systems increasingly mediate educational experiences, there is a growing tendency to reduce students to data points and learning outcomes to measurable metrics. This instrumental rationality risks displacing the ethical cultivation that occurs through reverential learning, thereby hollowing out the spiritual telos of Islamic education. In Islamic learning, this could undermine the traditional culture of humility, respect, and attentiveness toward teachers.

These tensions underscore the urgent need for a nuanced ethical framework that does not dismiss AI outright but interrogates its integration through the normative values of Islamic pedagogy. Rather than positioning AI as a replacement for human educators, educational stakeholders within the Islamic tradition must reimagine its role as a supplementary tool—one that supports, but does not supplant, the teacher's moral authority and human presence. The insights of *Ta'limul Muta'allim* invite a reevaluation of current educational innovations through an ethical-teleological lens, emphasizing that any technological intervention in education must preserve the spiritual, relational, and ethical foundations of learning.

Synthesis and Ethical Propositions

The convergence of artificial intelligence (AI) with traditional Islamic education systems, particularly within the *Pesantren* milieu, demands pedagogical innovation and a robust ethical interrogation. Integrating AI technologies into the educational framework for *santri* must be undertaken with acute sensitivity to classical Islamic pedagogy's ontological foundations and ethical aspirations. At stake is not merely the efficiency of learning delivery, but the preservation of a moral cosmology in which education is seen as an act of worship (*ibadah*),¹⁵ a means of spiritual elevation (*tazkiyah*), and a transmission of sacred trust (*amanah*).

From a curricular standpoint, the incursion of AI into *Pesantren* necessitates a critical reorientation. Rather than uncritically adopting AI tools for instructional expediency, there is a pressing need to recalibrate curricula that foreground ethical literacy alongside technological fluency. The presence of AI must be contextualized within a value-laden discourse that emphasizes *niyyah* (intentionality), *ikhlas* (sincerity), and *mas'uliyah* (accountability). Courses and modules should explicitly address the ethical parameters of AI usage, equipping *santri* with operational competence and moral discernment to navigate algorithmic systems through an Islamic lens. This requires curricular frameworks that integrate what so-called "*fiqh al-hadarah*" (jurisprudence of civilization) and "*usul al-akhlaq*" (principles of ethics) into contemporary discussions on digital technology.

Journal of Consumer Psychology.,” *Journal of Consumer Psychology*, September 9, 2024, jcpy.1441, <https://doi.org/10.1002/jcpy.1441>.

¹⁴ Muhammad Ali Noer and Azin Sarumpaet, “Konsep Adab Peserta Didik Dalam Pembelajaran Menurut Az-Zarnuji Dan Implikasinya Terhadap Pendidikan Karakter Di Indonesia,” *Al-Hikmah: Jurnal Agama Dan Ilmu Pengetahuan* 14, no. 2 (December 18, 2017): 181–208, [https://doi.org/10.25299/al-hikmah:jaip.2017.vol14\(2\).1028](https://doi.org/10.25299/al-hikmah:jaip.2017.vol14(2).1028).

¹⁵ Rudi Ahmad Suryadi, Asy'ari Asy'ari, and Euis Latipah, “The Objectives of Moral Education on Islamic View: -,” *East Asian Journal of Multidisciplinary Research* 3, no. 2 (March 1, 2024): 569–78, <https://doi.org/10.55927/eajmr.v3i2.7724>.

The ethical compass of *Pesantren* education cannot be severed from the *syar'i* boundaries and codes of *adab* that traditionally govern all modes of knowledge engagement.¹⁶ Therefore, the implementation of AI must be subjected to *fiqh*-based scrutiny to ensure compliance with Islamic legal-ethical norms. Such scrutiny involves assessing AI applications against criteria such as transparency of information sources, the preservation of *amanah ilmiyyah* (epistemic trust), and the prevention of *fitnah* (moral and doctrinal confusion). Additionally, the centrality of *adab*—as emphasized in *Ta'limul Muta'allim*—must be operationalized in AI-mediated learning environments through strict guidelines that prioritize the dignity of both teacher and student. For example, interactions with AI-based learning systems should be framed within supervised, dialogical settings that reinforce the pedagogical authority of the human teacher (*Kiai*) and maintain the sanctity of knowledge transmission.

To address these challenges constructively, it is imperative to develop a normative ethical framework grounded in the values articulated by Az-Zarnuji. *Ta'limul Muta'allim* offers a repertoire of principles—sincerity, reverence for teachers, patience in seeking knowledge, and spiritual intentionality—that can be an ethical scaffolding for AI integration. This framework should function not as a static set of prohibitions but as a dynamic ethic that informs institutional policy, instructional design, and student conduct. For instance, AI should be evaluated based on whether it facilitates or obstructs *barakah* acquisition, cultivates *adab*, and establishes *silah ruhaniyyah* (spiritual bonds) between learner and mentor. Any deployment of technology that undermines these aims risks contravening the moral telos of Islamic education.

In synthesizing these ethical imperatives, this study proposes a triadic model for AI integration in Islamic learning: (1) epistemic alignment with Islamic knowledge traditions, (2) ethical compatibility with the norms of *adab*, and (3) institutional oversight grounded in *maslahah* (public good) and *hikmah* (wise judgment). This model aims to ensure that technological adoption remains rooted in the values and objectives of Islamic education.

For instance, a *pesantren* integrating AI through platforms like *TafsirBot*—an AI-based Quranic commentary tool—could apply this model by ensuring that the platform draws from recognized *tafsir* authorities (epistemic alignment), is used under the supervision of qualified *kiai* to guide proper *adab* in digital inquiry (ethical compatibility), and operates within a policy framework set by *pesantren* leadership to serve the spiritual and communal benefit of *santri* (institutional oversight).

Such an approach not only safeguards the pedagogical and ethical integrity of the *pesantren* system in the digital age but also enables a morally coherent engagement with technological innovation—faithful to the transformative spirit of *tarbiyah* as envisioned in classical Islamic scholarship.

Conclusion

This study has critically examined the ethical tensions arising from integrating artificial intelligence into traditional Islamic pedagogy, particularly within the *Pesantren* system, through the normative lens of *Ta'limul Muta'allim*. While AI technologies offer

¹⁶ Munawar Kholil, Abdur Rahman, and Muhammad Isa Anshory, “Ta’dib (Penanaman Adab) Di Pondok Pesantren,” *TSAQOFAH* 4, no. 5 (July 18, 2024): 3556–74, <https://doi.org/10.58578/tsaqofah.v4i5.3380>.

unprecedented opportunities for accessibility and instructional efficiency, their mechanistic and impersonal character raises profound challenges to classical Islamic education's spiritual, relational, and moral foundations. The findings demonstrate that from Az-Zarnuji's perspective, the role of the teacher (*kiai*) is not merely informational but formational, encompassing moral guidance, the cultivation of *adab*, and the transmission of *barakah*—dimensions that AI cannot replicate. Furthermore, the ethical dilemmas surrounding personalization, spiritual internalization, and the risk of dehumanization necessitate a cautious and principled approach to AI deployment. As a constructive response, this study has synthesized a normative ethical framework anchored in sincerity (*ikhlas*), reverence for knowledge authorities, and the moral teleology of Islamic learning. The proposed propositions emphasize the imperative of aligning AI technologies with *syar'i* and ethical guidelines, embedding them within curricula that nurture holistic human development rather than merely cognitive proficiency. Ultimately, this research underscores the necessity of safeguarding the soul of Islamic education in an increasingly algorithmic age—ensuring that technological innovation serves, rather than supplants, the sacred trust of pedagogical transformation.

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