Annual International Conference on Islamic Education (AICIED)
P-ISSN 3032-2146, E-ISSN 3032-260X
Volume 3, January - December 2025
https://prosiding.iainponorogo.ac.id/index.php/aicied

The Creativity of Islamic Boarding School Teachers in Combining Tradition and Technology: The Utilization of Artificial Intelligence (AI) as a Learning Innovation for Students

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ARTICLE INFO

Keywords:
Teacher Creativity, Islamic Boarding Schools, Artificial Intelligence (AI), Learning Innovation, Tradition And Technology.

ABSTRACT

The development of digital technology presents challenges as well as opportunities for the world of education, including in the pesantren environment. As an institution known for maintaining Islamic scientific traditions, Islamic boarding schools are required to adapt without losing their original values. This study, conducted in 2025, aims to describe the creativity of pesantren teachers in combining classical learning traditions with the use of modern technology, especially artificial intelligence (AI), as a learning innovation for students. This research approach uses a descriptive qualitative method with data collection techniques through interviews, observations, and documentation of several teachers who have applied AI technology in the teaching and learning process. The results of the study show that pesantren teachers are able to integrate traditional values such as talaqqi, memorization, and yellow book discussions with AI-based technology to enrich the learning experience of students. The use of AI not only increases learning effectiveness, but also fosters the spirit of independent and creative learning among students. In addition, this study offers an original contribution to Islamic education in Indonesia by providing a practical and contextual model for integrating AI within pesantren settings, which can be adopted by similar institutions seeking balanced and value-based technological adaptation. The creativity of teachers in combining tradition and technology is a tangible manifestation of the moderation of pesantren education in the digital era.

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INTRODUCTION

Islamic boarding schools are known as Islamic educational institutions with a strong tradition of scholarship. Learning patterns such as *talaqqi, sorogan, bandongan*, and *kajian kitab kuning* have become characteristic of Islamic boarding schools and continue to be maintained to this day. This learning model not only aims to transfer knowledge, but also to shape manners, spiritual closeness to teachers, and a deep understanding of religious texts.

However, the development of digital technology in the last two decades has brought about major changes in access and learning methods. The world of general education has made extensive use of technology to support learning, including the use of artificial intelligence (AI). A number of studies show that the use of AI can increase the effectiveness of learning, provide quick feedback, and support independent learning by students.[1] In Indonesia, the use of digital technology has begun to be implemented in several Islamic educational institutions, but its application in Islamic boarding schools is still relatively limited.[2] Global educational organizations highlight that digital tools, including AI, played a crucial role in maintaining learning continuity during crisis and post-pandemic recovery.[3]

Preliminary evidence supports this limitation: recent studies show that although digital tools are increasingly used in some pesantren, their adoption remains focused on basic administrative tasks, simple multimedia materials, and online communication rather than AI-supported instructional systems. A case study in several pesantren in Samarinda similarly found that teachers relied on images and videos as their primary digital tools, while AI-based platforms had not yet been introduced due to infrastructure constraints and low technological readiness.[4] These findings align with reports from the Ministry of

[1] "The Influence of Artificial Intelligence on Traditional Sorogan and Bandongan Learning Methods in Arabic | Proceeding of International Conference of Religion, Health, Education, Science and Technology," diakses 10 November 2025, https://journal.ibrahimy.ac.id/index.php/icorhestech/article/view/5686.

[2] "Development of Media and Learning Resources at Islamic Boarding Schools Facing Education in the Digital Era | GIC Proceeding," diakses 10 November 2025, http://proceedings.uinbukittinggi.ac.id/gic/article/view/62.

[3] "AI and education: guidance for policy-makers - UNESCO Digital Library," diakses 4 Desember 2025, https://unesdoc.unesco.org/ark:/48223/pf0000376709.

[4] Ida Suryani Wijaya dkk., "Utilization of Digital Technology in Islamic Boarding Schools: A Case Study in Samarinda," *Lentera: Jurnal Ilmu Dakwah Dan Komunikasi*, 31 Desember 2023, 145–57, https://doi.org/10.21093/lentera.v7i2.7390.

Religious Affairs, which emphasize that digital transformation in pesantren remains uneven and requires major institutional support before advanced technologies such as AI can be integrated effectively.[5] This condition reflects what UNESCO identifies as "emergency-like constraints," where institutions with limited digital readiness struggle to integrate technology effectively.[6]

Previous studies have mostly discussed the digitization of bording school administration, santri digital literacy, or the use of online learning media in general. Meanwhile, studies that specifically discuss the creativity of bording school teachers in combining traditional methods with AI technology as a learning innovation are still very few.[7] This is where the gap in this study lies.

This study builds on previous research that has largely focused on administrative digitization, students' digital literacy, and the use of online platforms in Islamic boarding schools,[8] while studies on artificial intelligence typically emphasize users' perceptions or technical usage without examining its integration with traditional methods such as talaqqi, sorogan, and bandongan.[9] This indicates a clear research gap, as no existing studies explicitly address teachers' creativity in combining classical pesantren traditions with AI, nor provide a conceptual model explaining the relationship between tradition, technology, and the teacher's mediating role in learning. Therefore, this study offers novelty by exploring how pesantren teachers integrate AI with traditional teaching practices and by proposing an initial conceptual understanding of how tradition and technology can be harmonized within the context of Islamic boarding school education.

Islamic bording school have unique values, learning rhythms, and teacher-student relationships. Therefore, technological adaptation cannot be done directly as in schools or universities. The role of teachers is a key factor, because teachers are both guardians of tradition and mediators of change. AI integration can only work well if teachers

[5] "Kemenag: Diperlukan implementasi digitalisasi di lingkungan pesantren - ANTARA News," diakses 2 Desember 2025, https://www.antaranews.com/berita/4720457/kemenag-diperlukan-implementasi-digitalisasi-di-lingkungan-pesantren?utm_source=chatgpt.com.

[6] "unesdoc.unesco.org/ark:/48223/pf0000385723/PDF/385723eng.pdf.multi," diakses 4 Desember 2025, https://unesdoc.unesco.org/ark:/48223/pf0000385723/PDF/385723eng.pdf.multi.

[7] Ahmad Syarif Hidayatullah dkk., "Utilization of Artificial Intelligence in Islamic Religious Education: A Case Study of Darul Hikmah Islamic Boarding School," *Journal of English Language and Education* 10, no. 2 (2025): 532–40, https://doi.org/10.31004/jele.v10i2.767.

[8] Wijaya dkk., "Utilization of Digital Technology in Islamic Boarding Schools."

[9] Annisa Agustina dkk., "Artificial Intelligence for Arabic Lessons Will It Helps Teachers?," *Al-Hijr: Journal of Adulearn World* 1, no. 1 (2022): 1–10, https://doi.org/10.55849/alhijr.v1i1.498.

understand how the technology is used not to replace tradition, but to enhance learning support.

To ensure analytical clarity, this study is delimited to the use of artificial intelligence specifically in Arabic language learning, particularly in vocabulary development, reading assistance, and text comprehension. Although digital tools may be used in other subjects, this study intentionally focuses on Arabic because it represents a core discipline in many pesantren and is closely tied to classical learning methods such as talaqqi, sorogan, and bandongan. This narrower scope allows for a more focused analysis of how AI interacts with linguistic, pedagogical, and spiritual dimensions in pesantren education.

Considering this, this study focuses on efforts to describe the creativity of Islamic boarding school teachers in utilizing artificial intelligence (AI) as a means of supporting the learning process, explaining the preservation of classical methods in the application of modern technology, and analyzing the various impacts and challenges that arise from the use of AI in Islamic boarding schools. This study is important because it provides an understanding of how Islamic boarding schools are able to respond to technological advances wisely and proportionally, without losing their identity and traditional values that have become the foundation of Islamic education.

RESEARCH METHOD

Research Design

This study uses a qualitative descriptive[10] approach to explore how Arabic language teachers at Pondok Pesantren Wali Songo Ngabar integrate artificial intelligence (AI) into their instructional practices. The qualitative design was chosen to obtain an in-depth understanding of teachers' pedagogical strategies, challenges, and interpretations rather than numerical generalization. The selection of participants used purposive sampling, as the study prioritized individuals with relevant teaching experience and exposure to digital or AI-assisted learning tools.[11]

[10] Robab Latifnejad Roudsari, "Qualitative description: A less sophisticated approach for junior qualitative researchers.," *Journal of Midwifery & Reproductive Health* 7, no. 4 (2019): 1856, https://doi.org/10.22038/jmrh.2019.13927.

[11] Emma Bell dkk., *Business Research Methods* (Oxford University Press, 2022).

Research Site: Pondok Pesantren Wali Songo Ngabar

Pondok Pesantren Wali Songo Ngabar is a long-established Islamic boarding school located in Ngabar, Siman, Ponorogo, East Java. Founded on 4 April 1961, it has developed into a large educational ecosystem serving more than 3,500 students across multiple levels, including TA Al-Manaar, MI Mamba'ul Huda, Tarbiyatul Mu'allimat Al-Islamiyyah (TMI), and higher education institutions under IAIRM.

The pesantren's official vision is to develop "students with strong pesantren character who excel academically and are globally competitive in Islamic Studies, Arabic, English, and Science.[12] This vision is supported by mission components such as strengthening theoretical and practical competencies, improving the quality of educational management, expanding modern facilities, and fostering collaborations at national and international levels.[13]

Recent developments include the construction of a digital library (Ngabar Hybrid Library) and the renovation of a modern auditorium inaugurated in 2025 reflecting the pesantren's gradual adoption of digital infrastructure.[14] However, the integration of digital tools in classroom teaching especially AI-based applications remains limited, making this site relevant for studying the intersection of tradition, technology, and pedagogical innovation.

Participants

Four Arabic language teachers participated in this study, selected through purposive sampling based on the following criteria:

1. Teaching Arabic at the TMt-I level,
2. Having at least two years of teaching experience, and
3. Possessing familiarity with digital learning tools or initial exposure to AI-supported applications.

The focus of purposive sampling was to obtain rich, contextual insight rather than

[12] "About – PPWS Ngabar," diakses 2 Desember 2025, https://ppwalisongo.id/home/about/#.

[13] Siti Khoiril Umaroh, "Pelaksanaan Program Amaliyah Tadris Untuk Menumbuhkan Jiwa Dan Keterampilan Mengajar Santri Pondok Pesantren Wali Songo Ngabar Siman Ponorogo." (diploma, IAIN Ponorogo, 2024), https://etheses.iainponorogo.ac.id/27615/.

[14] "Menteri Agama Resmikan Auditorium dan Perpustakaan Digital Ponpes Wali Songo Ngabar – Bagian Protokol dan Komunikasi Pimpinan," diakses 2 Desember 2025, https://prokopim.ponorogo.go.id/2025/09/menteri-agama-resmikan-auditorium-dan-perpustakaan-digital-ponpes-wali-songo-ngabar/?utm_source=chatgpt.com.

statistical representativeness. The participating teachers actively engaged in pedagogical innovation and explored technological integration while maintaining classical pesantren methods such as talaqqi, sorogan, and bandongan.

The profile of participants is presented below to support transferability:

Participant Name	Age	Teaching Experience	Educational Background	Technology Experience
Ustadzah Afifah	22	4 years	TMt-I graduate; currently pursuing a B.A. in Arabic Education	Basic digital literacy; able to operate common learning applications
Ustadzah Annida	20	2 years	TMt-I graduate	Uses simple digital tools for vocabulary and exercise development
Ustadzah Aulia	23	5 years	TMt-I graduate; has participated in Islamic studies training	Has experimented with AI tools (e.g., ChatGPT) for generating lesson ideas
Ustadzah Rofi	21	3 years	TMt-I graduate / holds a pesantren teaching certification	Familiar with multimedia teaching tools; limited exposure to AI-based apps

Data Collection Technique

Data were collected using semi-structured interviews, allowing the researcher to explore teacher experiences while maintaining flexibility in probing deeper insights. The interview guide consisted of three key domains:

1. Teachers' Understanding and Experience with AI: Their conceptual understanding of AI, Initial attempts at using AI platforms (ChatGPT, translation tools, vocabulary generators)
2. AI Integration in Arabic Language Instruction: Types of applications used, Alignment with traditional methods (talaqqi, sorogan, bandongan), Perceived benefits and limitations
3. Creativity, Challenges, and Pedagogical Strategies: How teachers modify classical approaches, Obstacles related to infrastructure, digital literacy, and

institutional guidelines. Perceptions of AI effectiveness in improving learning outcomes

The complete interview guide is provided in the Appendix following qualitative research reporting standards.

Data Analysis Technique

Data were analyzed using the Miles and Huberman interactive model, which includes three interconnected stages: data reduction, data display, and conclusion drawing/verification.[15]

1. Data Reduction

The researcher transcribed all interview recordings and conducted initial coding by marking meaningful statements. Codes with similar meanings were grouped into thematic categories, such as "AI benefits," "teacher creativity," "technological barriers," and "integration with classical methods."

2. Data Display

Reduced data were organized into thematic matrices and comparative tables to identify similarities and variations across participants. Descriptive narrative summaries were prepared to reveal patterns and relationships between themes.

3. Conclusion Drawing and Verification

Conclusions were developed iteratively as patterns emerged from the data. Verification involved rechecking raw transcripts, reviewing field notes, and conducting cross-participant triangulation to ensure credibility, accuracy, and alignment with the empirical findings.

Ethical Considerations

All participants provided informed consent before participating in this study. The use of their real names (Ustadzah Afifah, Ustadzah Annida, Ustadzah Aulia, and Ustadzah Rofi) was approved by the participants, and they agreed for their statements to be cited for academic purposes. The researcher ensured that all data were handled responsibly and used solely for educational and research activities.

[15] Lili Sururi Asipi dkk., "The Analysis of Reading Habits Using Miles and Huberman Interactive Model to Empower Students' Literacy at IPB Cirebon," *International Journal of Education and Humanities* 2, no. 3 (2022): 117–25, https://doi.org/10.58557/ijeh.v2i3.98.

RESULT AND DISCUSSION

Forms of Teacher Creativity in Utilizing Artificial Intelligence (AI)

The findings reveal that the four Arabic teachers at Pondok Pesantren Wali Songo Ngabar exhibit diverse forms of pedagogical creativity in adopting AI tools, each influenced by their teaching experience and digital familiarity. Ustadzah Afifah, who has four years of teaching experience, demonstrates a structured yet adaptive approach by using ChatGPT to generate draft materials before manually refining them. She explained: "I never use the AI output exactly as it is. I edit and adjust almost every sentence so that the examples match our kitab, our pesantren culture, and the students' level." – Ustadzah Afifah, This reflects a conscious stance that AI is not an authoritative source but a creative prompt. Her approach aligns with Beghetto & Kaufman's theory that creativity is contextual and bound to cultural values rather than purely technical innovation.[16]

Meanwhile, Ustadzah Aulia, one of the more digitally confident teachers, uses AI not only for material development but also as a tool to explore alternative teaching techniques. She shared: "Sometimes I ask AI to give me three different ways to teach the same vocabulary topic. I don't copy them, but they give me new ideas. It helps me think outside my usual pattern." – Ustadzah Aulia

Her statement demonstrates generative creativity, where AI becomes a brainstorming partner that expands pedagogical variation. Ustadzah Annida, despite having only two years of experience, uses AI for efficiency, especially in producing vocabulary lists and simple exercises. She admits: "AI saves time. When I need twenty questions, it makes them instantly. But I always re-check every item because AI sometimes misses the grammar rules." – Ustadzah Annida

This shows how less-experienced teachers rely on AI for productivity while still maintaining accuracy checks.

Finally, Ustadzah Rofi utilizes AI in a more selective manner, primarily for creating digital worksheets and visual aids: "I rarely use AI for explanation, but I use it to make tables, diagrams, and pictures. Students today like visuals, so it helps them pay attention." – Ustadzah Rofi, Her creative use of AI-generated visuals reflects the shift

[16] Ronald A. Beghetto dan James C. Kaufman, "Theories of Creativity," dalam *Creativity and Innovation*, 2 ed. (Routledge, 2022).

toward multimodal learning preferred by younger students. Research confirms that the integration of AI-based media can significantly increase engagement and retention in language learning.[17]

Across all four teachers, AI serves as a supplementary source of creativity, not a determinant of instructional content. Classical pesantren methods *talaqqi, sorogan*, and *bandongan* remain central. AI is positioned as a flexible enhancer that enriches but does not interfere with spiritual and relational dimensions of learning.

Dynamics of Integration: Between Efficiency, Ethical Caution, and Value Preservation

The integration of AI in Ngabar reveals a dynamic negotiation between modern efficiency and traditional values. Teachers appreciate the time-saving benefits of AI, especially for preparing materials, generating vocabulary drills, and structuring exercises. As noted earlier, Ustadzah Annida relies on AI for rapid task generation.

However, despite these advantages, all four teachers express concerns about the ethical and epistemic reliability of AI particularly regarding religious content. Ustadzah Afifah states: "For grammar or vocabulary it helps, but for explanations related to our kitab kuning, I cannot trust AI. Only teachers who studied directly from their asatidz can explain those parts." This concern aligns with broader academic warnings that AI lacks the contextual sensitivity required for religious texts.[18] This cautious stance aligns with UNESCO's global framework, which stresses that AI in education must be implemented with strong ethical safeguards, especially in culturally sensitive learning environments.[19]

Ustadzah Aulia adds another dimension regarding sanad keilmuan: "If students depend too much on AI, they will lose the habit of asking their teachers. We worry that their connection to sanad will weaken." This highlights a uniquely pesantren-specific concern: AI may unintentionally reduce the centrality of teacher–student transmission, which is not merely academic but spiritual.

These concerns resonate with Rahman & Afandi's study (2023), which notes that

[17] Soad Matar, "The Development of Educational Technology and Artificial Intelligence and Their Impact on the Future of Education: Opportunities and Risks," *Journal of Posthumanism* 5, no. 7 (2025): 1271–92.

[18] Sumei Hu, "The Effect of Artificial Intelligence-Assisted Personalized Learning on Student Learning Outcomes: A Meta-Analysis Based on 31 Empirical Research Papers," *Science Insights Education Frontiers* 24, no. 1 (2024): 3873–94, https://doi.org/10.15354/sief.24.re395.

[19] "unesdoc.unesco.org/ark:/48223/pf0000389351/PDF/389351ara.pdf.multi," diakses 4 Desember 2025, https://unesdoc.unesco.org/ark:/48223/pf0000389351/PDF/389351ara.pdf.multi.

Islamic education teachers exhibit ethical caution with AI, but in pesantren contexts the issue is deeper rooted in protecting spiritual lineage and the authenticity of knowledge transmission.[20]

Indonesian educational thinkers offer theoretical support for this balanced approach. A. Malik Fadjar emphasizes integrasi ilmu harmonizing religious knowledge with scientific advancement without allowing one to diminish the other.[21] Ngabar teachers exemplify this synthesis by accepting technological tools while filtering them through Islamic epistemic values.

Similarly, Imam B. Prasodjo describes pesantren as a "moral-social ecosystem" where knowledge flows through interaction, mentorship, and ethical modeling. This explains why AI can assist learning but cannot replace the human tarbiyah central to pesantren life.

AI as a Supportive Tool, Not a Substitute for Teacher Authority

All four teachers unanimously position AI as a supportive assistance, never as a replacement for their authority or interpretive role. Ustadzah Rofi emphasizes: "AI can help students practice pronunciation, but the final correction must be from us. AI doesn't understand the rules of sharaf and cannot hear the intention behind recitation." Her statement reflects a broader concern: AI lacks the spiritual, emotional, and situational intelligence that teachers possess.

Ustadzah Aulia adds: "Students sometimes think AI is always right. I tell them: 'No, AI can be wrong. You must ask your teacher.'' This highlights the pedagogical challenge of preventing over-reliance on AI something widely observed in global educational contexts.[22]

The teachers' approach aligns with Holmes, Bialik & Fadel's (2019) concept of "human-centered AI in education," which argues that AI should augment not replace teacher authority.[23] Furthermore, their attitudes reflect Islamic education scholars'

[20] Muhammad Rezza Nur Rahman dan Nur Kholik Afandi, "Islamic Education Students' Perceptions: A Phenomenological Study on the Ethical of Using Artificial Intelligence (AI) in Learning," *J-PAI: Jurnal Pendidikan Agama Islam* 11, no. 1 (2024), https://doi.org/10.18860/jpai.v11i1.27932.

[21] Prof Dr Muh Idris M.Ag, *VISI DAN PRAKSIS PENGEMBANGAN PENDIDIKAN ISLAM A. MALIK FADJAR* (UMMPress, 2023).

[22] Hu, "The Effect of Artificial Intelligence-Assisted Personalized Learning on Student Learning Outcomes."

[23] W. Holmes dkk., *Artificial Intelligence in Education Promises and Implications for Teaching and Learning*, dalam *(1st Ed.). Center for Curriculum Redesign: Boston, MA, USA. (2019)* (Center for

recommendations that technology should serve as *khadim al-'ilm* (a servant of knowledge), not *sumber al-'ilm* (a source of knowledge).

Implementation Challenges: Limited Access, Teacher-Centered Use, and Cultural Fit

Although teachers see clear benefits in using AI, its implementation at Pondok Pesantren Wali Songo Ngabar is shaped by several unique constraints within the pesantren environment.

a. Technology Access Is Limited to Teacher

In contrast to many formal schools where students have personal access to digital tools, students in this pesantren do not carry mobile phones as part of the institution's discipline and value system. Consequently, the only individuals who use digital devices and who can access AI are the teachers.

This means that AI is utilized exclusively at the teacher level to support lesson planning, generate materials, or refine teaching strategies. The integration of AI in the classroom therefore depends heavily on each teacher's schedule, digital literacy, and internet connectivity. Whenever teachers are overloaded or connections are unstable, AI use becomes minimal. In this setting, access to technology is intentionally centralized, placing teachers as the sole operators and decision-makers.

b. Increased Workload for Teachers

Because the teachers are the only users of AI, they must handle every stage of the process from searching for resources and generating ideas to revising AI outputs and aligning them with Islamic teachings and pesantren norms. As Ustadzah Afifah explained: "AI helps, but everything still needs to be corrected. Sometimes it feels like I'm doing more work fixing AI's output and making sure it fits the kitab and our students' level."

This reflects a common pattern in early AI adoption environments: technology does not necessarily reduce workload. Instead, it can create new layers of responsibility, such as evaluating the accuracy of AI-generated content, ensuring theological appropriateness, and refining the language so it remains consistent with pesantren

Curriculum Redesign, 2019), https://circls.org/primers/artificial-intelligence-in-education-promises-and-implications-for-teaching-and-learning.

learning traditions.

c. Digital Literacy Efforts Focus on Teachers, Not Students

Because students do not use AI firsthand, digital literacy programs in this pesantren naturally target teacher competence and readiness. Discussions about plagiarism, ethical considerations, or how AI can support instructional design occur mainly among teachers. In practice, AI functions as a behind-the-scenes tool, shaping lesson preparation rather than becoming part of the students' direct learning experience. This differs from many studies in general education contexts, where both teachers and students are positioned as active users of AI tools. In the pesantren setting, however, traditional face-to-face learning through kitab reading, talaqqi, sorogan, and guided explanation remains central, while technology assists quietly from the background. A similar pattern is highlighted by UNICEF, noting that in low-resource environments teachers often become the primary drivers of technological adaptation, while students depend on teacher-mediated digital exposure.[24]

d. Ensuring Alignment with Pesantren Traditions and Learning Rhythms

Daily learning activities such as *sorogan, bandongan, muroja'ah*, and *muhadharah* follow long-established rhythms that carry spiritual and cultural significance. Teachers consistently emphasize that these practices must remain intact. Therefore, AI is typically used before the lesson begins, mainly during the planning and material development stages, rather than during direct instructional activities like *talaqqi.* In this arrangement, AI acts as a supportive planning tool rather than something that reshapes the visible structure of learning. This approach resonates with the findings of Mutmainah & Fauzi (2024), who highlight that digital transformation in Islamic educational institutions is most successful when technology is placed in harmony with existing traditions instead of overriding them.[25]

Synthesis with Theory and Previous Research

The expanded findings show that Ngabar teachers demonstrate value-rooted, culturally sensitive creativity in integrating AI. Their methods align with:

[24] "AI and education: guidance for policy-makers - UNESCO Digital Library."

[25] "Digital Transformation of Islamic Boarding School Education | Indonesian Journal of Islamic Studies," diakses 4 Desember 2025, https://ijis.umsida.ac.id/index.php/ijis/article/view/1723.

a. International theories: Contextual creativity (Beghetto & Kaufman), Human-centered AI (Holmes, Bialik & Fadel), Constructivist learning (active student engagement)
b. Indonesian Islamic education frameworks: *Integrasi ilmu* (A. Malik Fadjar), Pesantren as moral-spiritual ecosystem (Imam B. Prasodjo)
c. This study therefore proposes a conceptual model of AI integration in pesantren:

Tradition (sanad + talaqqi + spiritual values) + Technology (AI tools) + Teacher Mediation (filtering, adaptation, contextualization) = Value-based, ethically grounded innovation.

This model is particularly significant because prior studies tend to isolate AI as either a threat or an enhancement. The Ngabar case demonstrates a middle path: integrative moderation, where technology is welcomed but tightly guarded by ethical and cultural principles.

CONCLUSION

This research illustrates how Arabic teachers at Pondok Pesantren Wali Songo Ngabar engage with Artificial Intelligence (AI) mainly as a background support system rather than a direct instructional tool. AI is used to help them generate ideas, prepare materials, and improve the efficiency of lesson planning. However, the teachers do not rely on AI blindly; they carefully revise and adapt every output to ensure it aligns with pesantren norms, the structure of classical texts, and the learning readiness of their students. Throughout the study, the teachers also stressed that AI cannot assume the intellectual or spiritual role of the teacher. Core traditions such as talaqqi, sorogan, and bandongan remain firmly positioned as the foundation of learning, while AI merely complements these practices.

Practical Implications

The findings carry several meaningful implications:

1. For Teachers

Teachers are encouraged to continue strengthening their digital competence in ways that remain grounded in Islamic educational ethics. This includes adapting AI-generated content responsibly, recognizing its limitations, and maintaining the teacher's central role in shaping classroom values and understanding.

2. For Pesantren Leadership

Pesantren may consider developing ethical guidelines for AI use, offering clarity on what types of content are appropriate and outlining principles for responsible adoption, especially in subjects linked to religious texts. Training sessions for teachers could also strengthen the integration of technology without disrupting the established learning culture.

3. For the Ministry of Religious Affairs (Kemenag)

The study highlights the need for national guidance on how AI should be used within Islamic educational environments. Kemenag could support institutions by providing structured training, regulatory frameworks, and value-sensitive guidelines that ensure AI is used safely and in harmony with Islamic principles.

Theoretical Contributions

Theoretically, this study broadens the discussion on value-driven pedagogical creativity within Islamic education. It suggests that creativity is not only about producing new ideas but also about the skill of reshaping technological tools so they reinforce religious authenticity and preserve sanad and tradition. This contributes to the growing conversation on how Islamic educational practices can interact with emerging technologies without losing their cultural and spiritual character.

Limitations

Several limitations should be acknowledged. The study involved only four teachers, making the insights informative but not broadly generalizable. In addition, the research took place in a single pesantren whose traditions and practices may differ from other institutions. Finally, the scope was limited to Arabic language instruction, while other religious disciplines might experience different challenges and opportunities when engaging with AI.

Suggestions for Future Research

Future work could extend this study by:

1. Comparing AI adoption across different types of pesantren (salaf, modern, integrated).
2. Including larger and more diverse groups of teachers to explore broader patterns.

3. Investigating AI use in other religious subjects such as tafsir, hadith, or jurisprudence.
4. Examining how teacher perceptions evolve over time through longitudinal studies.

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