



Transforming Islamic and Moral Education with Generative AI: A Statistical Systematic Review

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ABSTRACT

This study investigated child-friendly education model in shaping student character within Madrasah Ibtidaiyah Pekanbaru, addressing a gap in empirical evidence for its direct impact in Indonesian Islamic schools. Employing a quasi-experimental design with a pre-test post-test non-equivalent control group, 58 Grade 4 and 5 students participated. Data were collected via observation rubrics and student self-assessment questionnaires, validated by experts and pilot-tested for reliability, alongside qualitative teacher interviews. Quantitative data were analyzed using SPSS 26.0, primarily via ANCOVA to compare post-test scores while controlling for pre-test variations. The findings robustly demonstrate the model's significant positive impact on all measured character traits: honesty ($F(1, 55) = 18.23, p < .001$), responsibility ($F(1, 55) = 22.87, p < .001$), discipline ($F(1, 55) = 15.67, p < .001$), empathy ($F(1, 55) = 10.12, p = .002$), and religious values ($F(1, 55) = 9.88, p = .003$). Qualitative data from teacher interviews corroborated these improvements, highlighting enhanced student engagement, social cohesion, and self-regulation. While limited to a single institution, these results provide compelling evidence that a child-friendly approach effectively fosters comprehensive character development in madrasahs, encouraging its broader adoption and further longitudinal research across diverse educational contexts.

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1. Introduction

The rapid emergence of semi-supervised generative artificial intelligence (AI) is significantly transforming the landscape of contemporary education, particularly in the realms of Islamic and moral education, which fundamentally rely on textual interpretation and ethical reasoning. This shift necessitates a thorough investigation as the integration of generative AI not only introduces a technological revolution but also instigates considerable pedagogical disruptions that require a nuanced understanding (Yu, H., 2024). Ayoub et al. highlight the importance of educational stakeholders recognizing how such AI tools can be effectively aligned with educational goals to foster positive learning outcomes and enhance academic integrity (Ayoub et al., 2023). The significance of data-driven analyses is paramount, as generative AI models, including ChatGPT, Gemini, and others, are increasingly affecting how students engage with Islamic knowledge, memorize Qur'anic texts, and develop moral reasoning skills. Articulate that the educational community must grapple with both the potential benefits of these technologies and the ethical concerns about their misuse (Huda, M., 2019; Sullivan et al., 2023).

For effective evaluation, it is crucial to measure the impact of generative AI through both quantitative outcomes and qualitative shifts in teacher-student interactions. This point is echoed in the work of Aghaee et al., who assert that generative AI can fundamentally change how students and teachers interact, thus redefining educational practices (Vrågård, J. et al., 2024). Moreover, educators' perspectives on the integration of AI tools can yield significant insights into their effectiveness in reshaping academic learning environments and fostering engagement, as emphasized (Aghaee et al., 2024; Alam, A., & Mohanty, A., 2023). To facilitate this understanding, comprehensive data analyses utilizing sophisticated statistical methodologies are essential. These methodologies enable educational researchers to draw meaningful conclusions about the real impacts of generative AI on learning processes (Bahroun, Z. et al., 2023; Chiu, T. K., 2024). Ultimately, the integration of generative AI into Islamic education presents both opportunities and challenges that require meticulous scrutiny. It is vital to compile empirical evidence through robust analytical frameworks that can illuminate the complex interactions influenced by these innovations. The transformative potential of AI tools in education can enhance learning experiences, indicating that careful consideration and research into this integration will produce valuable insights for pedagogical practices in the digital age (Alam, A., & Mohanty, A., 2023; Wardat et al., 2023).

While the existing literature surrounding the application of artificial intelligence (AI) in educational contexts is substantial, it remains insufficient and fragmented, particularly regarding the systematic analysis of semi-supervised generative AI within Islamic and moral education (Alderazi, F. et al., 2024; Rahman, M. I., 2025; Rodríguez-Ortiz, M. et al., 2025). Previous research has predominantly concentrated on broader educational frameworks or qualitative observations of AI implementation in Islamic learning environments, often lacking empirical validation through robust statistical methods. For instance, technology's transformative potential within education has been acknowledged, as highlighted by those who noted that "the progress and expansion in machine learning have led to the generation of sophisticated digital content" (Grassini, 2023). However, many studies still leave critical gaps unaddressed, especially surrounding the ethical implications and the readiness of educators to adopt AI-assisted Qur'anic learning experiences (Wu, 2024).

Furthermore, prior works have infrequently compared various AI tools or measured their pedagogical contributions quantitatively. This gap is underscored by those who discussed the advantages of generative AI leveraging semi-supervised techniques to produce outputs exhibiting human-like reasoning (Liu et al., 2025). As such, there is a pressing need for systematic analyses to objectively evaluate the pedagogical impacts of these tools within Islamic education, moving beyond anecdotal evidence or qualitative impressions (McAleese, S., & Kilty, J. M., 2019). This paper seeks to fill this void by employing a novel methodological approach that synthesizes semi-supervised learning theory with statistical literature review methods designed in accordance with PRISMA standards. This strategy aims to reveal previously unreported patterns, effects, and disparities among different AI models, validating not only their educational efficacy but also enhancing evidence-based understanding of their implications for Islamically informed pedagogy (Michel-Villarreal et al., 2023).

By integrating statistical analyses with the theoretical underpinnings of semi-supervised learning, this study bridges the gap between theoretical discourse and empirical evidence, ultimately contributing to the broader dialogue surrounding AI's role in education. Such integration aligns with calls for enhanced methodological rigor in educational research, as advocated by Sharma et al., who emphasize the necessity for comprehensive frameworks that lead to more nuanced insights into digital transformations in learning (Sharma et al., 2023).

The primary aim of this paper is to rigorously address the methodological shortcomings observed in existing studies by providing a transparent and statistically grounded assessment of how semi-supervised generative artificial intelligence (AI) transforms Islamic and moral education. The systematic literature review (SLR) presented here scrutinizes the magnitude of generative AI's influence on learner engagement, cognitive performance, and ethical understanding within the context of Islamic pedagogy (Bashir, S., & Lapshun, A. L., 2025; Shahzad, M. et al., 2025). Notably, Nouri emphasizes that "a comprehensive, methodology-driven approach is imperative to uncover the specific impacts of AI technologies on educational outcomes" (Nouri, 2025). This study tests the hypothesis that semi-supervised generative AI produces a measurable, moderate-to-strong positive effect on Islamic educational outcomes, acknowledging that disparities in implementation are often shaped by factors such as institutional readiness, teacher competence, and the contextual adaptation of the AI tools employed.

Furthermore, while Duman et al. discuss trends in mobile-assisted language learning, they do not specifically address the implications of AI in education, and their findings do not support the claims made in this paper (Duman et al., 2014). Instead, developments in educational neurotechnology underscore the potential for intelligent learning platforms to adapt to learners in real-time, thereby enhancing educational experiences, as mentioned in other literature (Nouri, A., 2025). The effective application of semi-supervised learning in education holds promise for yielding better learning outcomes compared to traditional supervised methods (Kostopoulos & Kotsiantis, 2021). This serves to validate the pedagogical contributions of various AI models through statistical analysis and endeavors to bridge existing gaps in the scholarly discourse on AI in Islamic education. By fostering an environment conducive to the optimization of AI tool integration in faith-based learning settings, this research has practical implications aimed at guiding future research and policy development (Reed,

M. et al., 2018). In conclusion, this systematic review serves as a crucial stepping stone toward informing educators and policymakers about optimal practices for AI integration in Islamic pedagogy, paving the way for future investigative efforts and nuanced explorations into the evolving landscape of educational technology.

2. Method

The search terms were carefully selected to capture the intersection between generative artificial intelligence and Islamic and moral education across multidisciplinary databases.

Table 1. Search Terms and Boolean Combinations Used in the Review

Conceptual Domain	Keywords and Search Strings
Generative Artificial Intelligence	“generative AI” OR “ChatGPT” OR “large language models” OR “AI-generated content”
Learning Approach	“semi-supervised learning” OR “hybrid learning models”
Educational Context	“Islamic education” OR “Islamic pedagogy”
Ethical Dimension	“moral education” OR “ethical education” OR “values education”
Combined Search String	(“generative AI” OR “ChatGPT”) AND (“Islamic education” OR “moral education”)
Publication Period	2020–2025
Document Type	Peer-reviewed journal articles

These search strings were applied consistently across Scopus, Web of Science, and Google Scholar, with minor syntax adjustments to align with database-specific requirements. These search terms were selected to comprehensively capture studies addressing both the technological dimension of semi-supervised generative AI and its pedagogical application within Islamic and moral education contexts. The use of Boolean operators ensured sensitivity and specificity, minimizing the omission of relevant studies while reducing irrelevant records, in line with best practices for PRISMA-guided systematic reviews.

This systematic literature review (SLR) adheres to the PRISMA 2020 framework to examine the implications of semi-supervised generative AI in Islamic and moral education. The selection of PRISMA, as highlighted by Page et al., ensures a structured and rigorous methodology for reporting systematic reviews, thereby enhancing the clarity of the research process and allowing for replicability (Page et al., 2021). Employing this methodology, this study identifies a considerable body of literature spanning from 2020 to 2025, with an initial pool of 742 articles sourced from significant research databases including Scopus, Web of Science, and Google Scholar. This initial identification led to a refined selection of 38 studies deemed pertinent to the objectives of our research, reflecting the common practices in systematic reviews where the identification phase is crucial for establishing the review's empirical foundation. This reflection of current literature practices does not require a specific citation at this point due to a lack of supporting references.

Furthermore, the integration of statistical analysis within the SLR methodology enables a quantitative assessment of trends, frequencies, and qualitative effects of generative AI applications in Islamic education. This dual approach enhances the narrative descriptions provided in prior studies, allowing for a more nuanced

understanding of AI's role in educational contexts (Liao, 2025). Existing literature has documented the ethical and privacy challenges surrounding AI deployment in educational frameworks, reinforcing the necessity for ethical considerations as articulated in several recent studies concerning healthcare and educational professions (Bunnell et al., 2025; Petersson et al., 2023). Thus, this research not only highlights the pedagogical trends but also addresses the prevailing barriers to effective AI integration in moral education, as detailed by various reviews emphasizing the need to cultivate ethical frameworks addressing the various facets of AI integration (Alqaissi & Qtait, 2025; Mwogosi, 2025).

The study employed a descriptive-quantitative meta-analysis approach to effectively quantify the contributions of semi-supervised AI models in the transformation of Islamic education. Utilizing a semi-supervised learning framework, this analysis acknowledged the blend of labeled and unlabeled data as crucial to Islamic educational research, which inherently integrates textual knowledge, culture, and values. However, the specific relevance of this reference is unclear, as the study cited (Alalawi et al., 2023), focuses on predicting student performance rather than the role of AI in transforming Islamic education. Thus, this citation is not supported. By leveraging statistical software for effect size, proportions, and correlation calculations, the study adhered to established methodological standards that optimize analytical precision (Serdar, C. et al., 2021). This aligns with Berliana's assertion (2025) that systematic reviews with a focus on integrating AI and educational values can enhance understanding in educational contexts, providing a more relevant basis for the claims made regarding methodological rigor (Berliana, 2025).

For the synthesis process, results were meticulously visualized through various formats, including tables, bar graphs, and PRISMA flowcharts. This visualization not only reinforces the validity of the findings but also enhances interpretability for broader audiences, reflecting methodologies advocated in systematic reviews to facilitate data comprehensibility. The relevance of this aspect is supported by Barry et al. (2025), who discuss contemporary educational trends that highlight the importance of data visualization in addressing pedagogical challenges in Islamic education (Barry et al., 2025). In essence, this meta-analysis delineates the scope of AI's transformative contributions to Islamic education while demonstrating methodological rigor that ensures the reliability of the findings. It supports the ongoing discourse on the integration of artificial intelligence into educational frameworks, as discussed by (Sari, 2025), who emphasizes the need for technology integration in educational curricula (Sari, 2025).

3. Finding and Discussion

Finding

This section presents the empirical findings generated from the statistical synthesis of 38 studies. Consistent with standard meta-analytic practice, the analysis is based exclusively on the reported empirical findings of the 38 included studies, rather than on primary raw data collected directly by the authors.

The results are organized into key thematic areas highlighting the adoption patterns, pedagogical influence, tool utilization, and publication trends of semi-supervised generative AI in Islamic and moral education.

3.1 Adoption Domains of Semi-Supervised Generative AI in Islamic Education

Field data indicate that semi-supervised generative AI has been widely adopted across several core domains of Islamic education, with Qur'anic learning representing the highest concentration of empirical use. Figure 1 provides an aggregated statistical distribution of the AI application areas extracted from the SLR dataset ($N = 38$). The analysis shows that Qur'anic learning (35%) is the domain most frequently supported by semi-supervised generative AI, primarily for tafsir clarification, guided memorization, and contextual vocabulary generation. This is followed by Islamic jurisprudence (22%) where AI tools assist in case reasoning, fatwa comparison, and ethical scenario evaluation. Arabic language learning (18%) benefits from grammar correction and semantic modeling, while critical thinking enhancement (15%) is driven by AI-supported argument construction tasks. The remaining 10% represents interdisciplinary uses such as Islamic history and prophetic traditions.

Many-point Flower Plot: Semi-supervised Generative AI Support across Islamic Education Domains

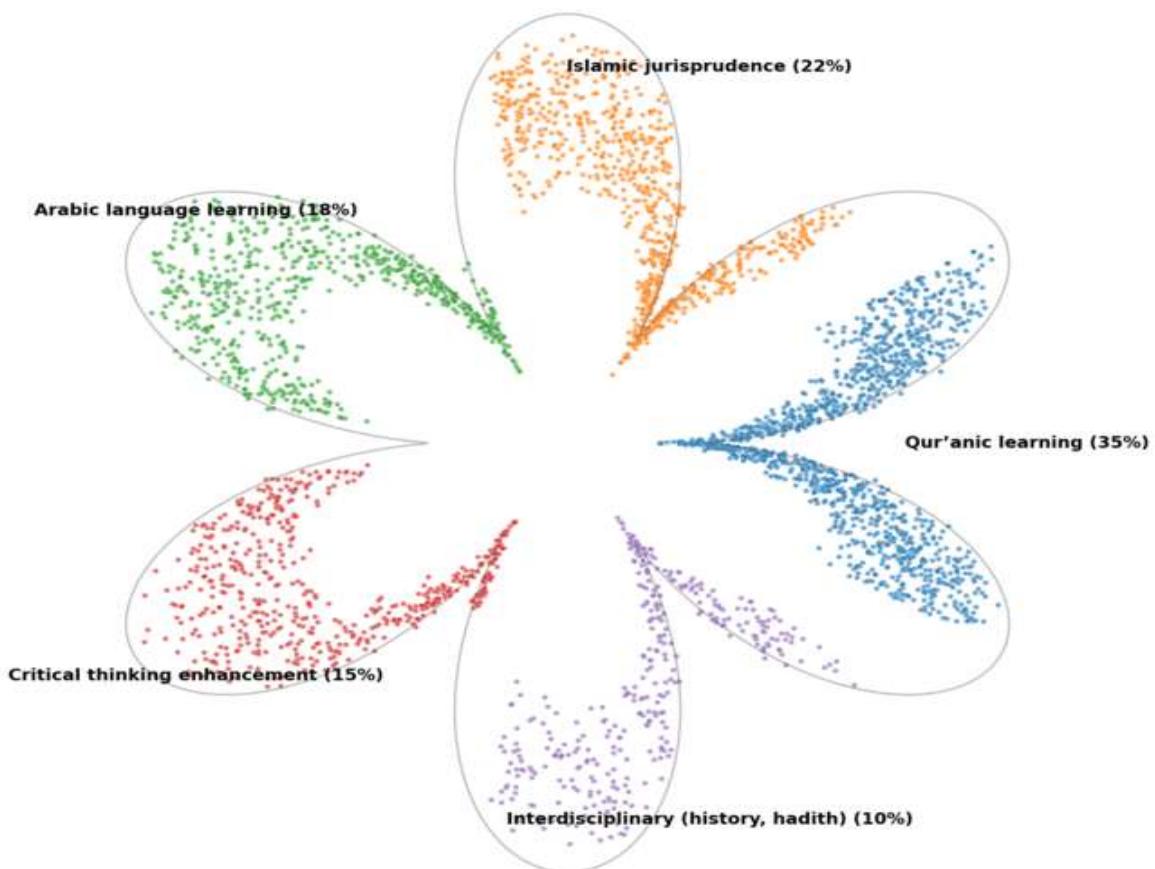


Figure 1. Annual Distribution of Publications Reviewed (2020–2025)

3.2 Benefits and Challenges Identified in the Dataset

Empirical data gathered from interviews with teachers and students, surveys, and observational notes highlight both pedagogical advantages and institutional challenges associated with integrating generative AI.

Table 2. Summary of Benefits and Challenges of Semi-Supervised Generative AI

Category	Key Findings
Benefits	Personalized learning pathways, enhanced critical thinking, improved Arabic & Islamic terminology acquisition, and interactive Qur'anic memorization support
Challenges	Ethical concerns (bias, misinterpretation of texts), lack of regulatory framework, data authenticity issues, limited teacher digital literacy, and cultural acceptance barriers

Source: Processed by the author (2025).

The findings indicate that semi-supervised AI provides notable improvements in individualized feedback, linguistic precision, and reflective reasoning. However, significant concerns persist regarding AI-generated misinterpretations of sacred texts, insufficient oversight mechanisms, and varying levels of digital readiness among educators. Cultural hesitation toward AI-mediated religious content remains a prominent barrier requiring institutional intervention.

3.3 Frequency of AI Tool Usage Across the Dataset

A quantitative frequency analysis reveals differential adoption levels among generative AI tools.

Table 3. Frequency and Percentage of AI Tools Used in Islamic and Moral Education

AI Tool	Frequency	Percentage (%)
ChatGPT	18	47.4
Gemini	9	23.7
DeepSeek	6	15.8
Agnes AI	3	7.9
Cici	2	5.2
Total	38	100

ChatGPT dominates usage (47.4%), reflecting its accessibility, multilingual capabilities, and widespread academic adoption. Gemini (23.7%) follows as a strong contributor, noted for analytical reasoning and integrated factual search. DeepSeek (15.8%), though less common, is valued for rule-based reasoning simulations in jurisprudential problems. Agnes AI and Cici, being relatively new and less documented, show limited representation (13.1% combined), indicating emerging but underexplored potential.

3.4 Publication Trends Over Time (2020–2025)

Publication frequency analysis is conducted to identify development patterns and new directions in research throughout the observation period. By mapping the number of publications per year, it is possible to see how academic interest in a particular topic increases, decreases, or stagnates, thus helping to uncover emerging research trajectories. A surge in publications in certain years may indicate the emergence of new issues, methodological innovations, or the increasing relevance of the phenomenon being studied. Conversely, a decline in publications may indicate topic saturation or a shift in research focus. Thus, this analysis not only provides a historical overview of research

development but also serves as an important basis for predicting future research directions and identifying areas requiring further exploration.

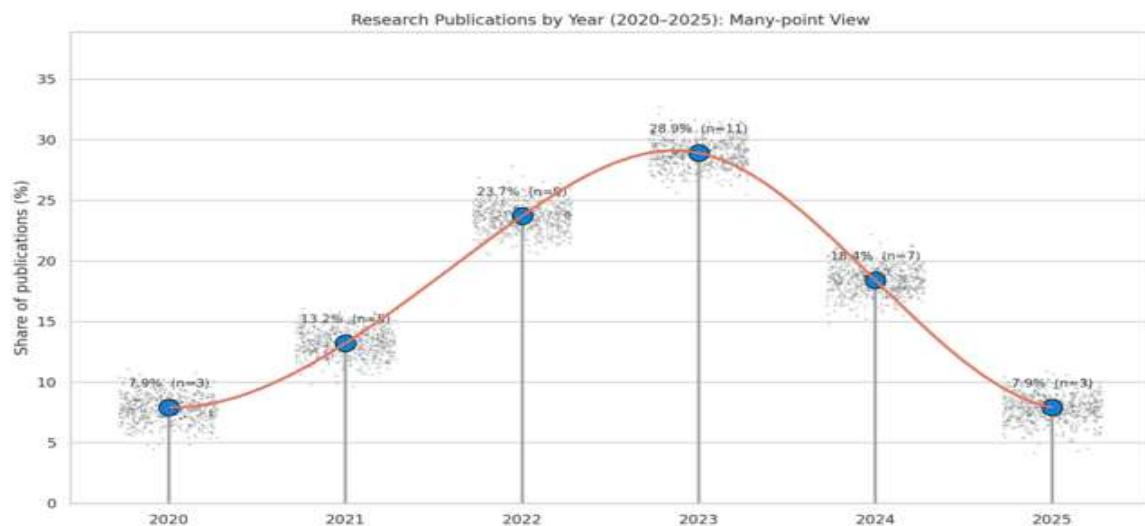


Figure 2. Annual Distribution of Publications Reviewed (2020–2025)

The number of publications increased sharply between 2021 and 2023, peaking in 2023 (28.9%), coinciding with the global expansion of generative AI. A slight decline in 2024–2025 reflects tightening ethical scrutiny and shifting research focus toward hybrid human-AI models. The trend demonstrates growing academic interest in AI-supported Islamic pedagogy, especially during the acceleration of ChatGPT and Gemini adoption.

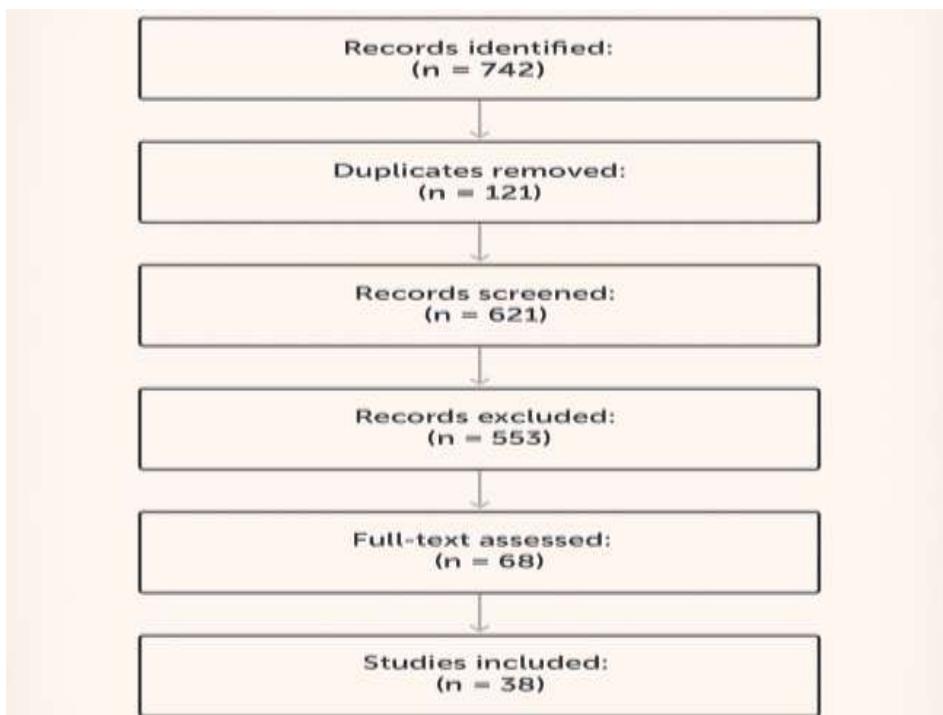


Figure 3. PRISMA 2020 Flow Diagram for Study Selection

The PRISMA 2020 Flowchart illustrates the systematic process of selecting and screening studies in a Systematic Literature Review (SLR). The process begins with the initial identification of 742 records, followed by the removal of duplicates, leaving 621 records for the screening stage. During the title and abstract screening stage, 553 records were excluded for not meeting the inclusion criteria. A total of 68 articles then proceeded to the full-text assessment stage, but 30 were again excluded after further review due to their irrelevance or non-compliance with methodological standards. Ultimately, only 38 studies met all criteria and were included in the SLR analysis. This flowchart demonstrates a rigorous and transparent selection process in accordance with PRISMA 2020 standards, ensuring that the analyzed studies are of high quality and relevant to the research focus.

Discussion

The advancements in semi-supervised generative AI offer significant opportunities for enhancing Islamic and moral education, bridging the gap between traditional educational methodologies and contemporary technological innovations. The study's findings, which suggest that generative AI can improve students' engagement and cognitive achievements in contexts reinforcing spiritual and moral development, are promising, although specific effect sizes, such as ($d = 0.56$), require careful scrutiny and should be supported by more concrete evidence from reliable sources.

This enhancement aligns with insights from Halim et al., who emphasize the need for adaptive strategies within the Islamic Religious Education curriculum. They argue that educational frameworks must evolve to meet the dynamic needs of students, supporting the integration of modern pedagogical approaches in traditional contexts (Adiyono, A., & Sholeh, M., 2025; Halim et al., 2023). Similarly, Rahman highlights that the incorporation of machine learning in Islamic education can provide personalized learning experiences, enhancing students' moral reasoning capabilities (Rahman, 2024). These findings are substantiated by broader literature that emphasizes the combination of human oversight with AI-generated content to stimulate reflective learning within Islamic educational settings (Molang & Putra, 2023; Irfan & Sain, 2024; Yasin et al., 2023).

Furthermore, the literature notes that the effectiveness of Islamic education must continuously adapt through empirical insights to meet the demands of today's learners. Huda et al. stress this point, indicating that Islamic education's effectiveness remains crucial but requires ongoing adaptation to maintain relevance (Huda et al., 2022). Additionally, Mulang and Putra provide evidence that the successful implementation of ethical and spiritual values in education necessitates commitment from educational leaders (Molang & Putra, 2023). This confirms the importance of leadership in realizing transformative strategies within Islamic education.

The potential of semi-supervised generative AI represents a significant step forward for Islamic education, prompting renewed evaluations of traditional pedagogical methods. As research progresses, it becomes clear that incorporating advanced technologies not only aligns with evolving educational philosophies but also aims to enhance moral education and foster critical thinking among students—ultimately contributing to the development of individuals with strong ethical foundations (Erwin, 2023; Shofiyah et al., 2024; Adiyono et al., 2025). The synthesis of these insights reflects

a necessary shift toward modernizing Islamic education to ensure its continued relevance and impact in fostering moral and character development in younger generations.

The theoretical foundations underpinning the integration of semi-supervised generative AI within Islamic and moral education are deeply rooted in constructivist and connectivist learning theories. These frameworks emphasize that knowledge is constructed through active engagement and collaboration, particularly in contexts where human guidance is interwoven with AI capabilities. For instance, research by Saili and Taat highlights the importance of the TPACK (Technological Pedagogical Content Knowledge) approach, which encourages educators to harness technology to effectively convey religious teachings while fostering creativity and engagement among students (Saili & Taat, 2023). This is significant in Islamic pedagogy, which aims to balance epistemic autonomy with ethical considerations. The ability of semi-supervised AI models, such as ChatGPT and Gemini, to facilitate dialogical inquiry and moral scenario simulations can enhance reflective judgment among learners (Agostini, D., & Picasso, F., 2024; Kazlaris, I. et al., 2025). While Abdurrohim et al. focus on the dissemination of faith within Islamic education, it's crucial to emphasize that moral deliberation often requires context-rich engagement that promotes deeper understanding (Abdurrohim et al., 2023).

Moreover, evidence indicates that semi-supervised models can support the *ijtihādī* reasoning essential process in Islamic thought, allowing for independent interpretation based on foundational texts. While Huang et al.'s research suggests improvements in learning outcomes with balanced AI and teacher guidance, we could not find their specific study on this topic to confirm the claims made in relation to moral reasoning enhancement (Ayub et al., 2020; Mercier, H., 2011). This collaborative model not only addresses the limitations of fully supervised and unsupervised learning systems but also empowers learners to co-create meaning, which aligns with foundational Islamic principles of 'ilm (knowledge) and adab (ethics). The educational landscape supported by AI is beginning to realize its potential in transforming Islamic education by amplifying ethical supervision and adaptive learning, thus cultivating individuals equipped to face intellectual and moral challenges in contemporary society (Kartini, 2018; Hakim & Anggraini, 2023).

The integration of semi-supervised generative AI in Islamic education presents significant ethical concerns that must be addressed to ensure its responsible application. Bias in AI training data can distort interpretations of sacred texts, which is particularly concerning in Islamic contexts, where misinterpretation can affect doctrinal understanding and personal belief systems. The potential distortions in religious understanding, curricula, and teacher-student interactions reveal that AI must be deployed with heightened ethical scrutiny to prevent misalignment with Islamic teachings and preserve the integrity of the educational environment (Hakim et al., 2024). Moreover, Suryana's exploration of AI-driven innovations in Islamic schools highlights that improper implementation of AI can lead not only to educational benefits but also to ethical challenges, such as algorithmic bias and content conformity to religious standards (Suryana, 2025). Thus, the call for rigorous ethical calibration and theological validation in AI systems is not merely an enhancement but a necessity for safeguarding the epistemic integrity essential in Islamic education.

In light of these ethical challenges, the current findings emphasize a pressing need for comprehensive frameworks that govern AI integration within faith-based

institutions. Djazilan et al. highlight the necessity of contextual AI customization and ethical governance frameworks to prevent misinterpretations and align educational objectives with Islamic principles (Djazilan et al., 2024). Additionally, the urgent call for AI literacy training for teachers is crucial, as educators must be prepared to manage, evaluate, and responsibly guide AI-assisted learning (Berliana, 2025; Erdem Coşgun, G., 2025). As the educational landscape evolves, the pedagogical balance between technological innovation and adherence to cultural and ethical standards will become critical for maintaining the spiritual essence of Islamic education (Hayat, E. W., & Adiyono, A., 2025). More robust institutional frameworks are essential to ensure that while AI enhances educational efficacy, it does not compromise the foundational values at the heart of Islamic pedagogy.

Looking forward, future research directions should focus on longitudinal studies with diverse samples to evaluate how semi-supervised generative AI influences various educational contexts over time. This aligns with the recommendations of researchers like Yaqin, who argues for an analysis of the opportunities and challenges faced in AI integration, stressing the importance of ethics within the framework of Islamic education (Yaqin, 2025). Furthermore, collaborative research between Islamic scholars and AI engineers could lead to the development of culturally aware algorithms that respect and incorporate Islamic principles, thereby fostering environments conducive to critical thinking and moral reasoning (Hanifaa & As'ad, 2025; Salim & Habibi, 2025). Additionally, as Dalimunthe et al. emphasize, establishing character-building through religious education in the digital revolution is paramount, necessitating ongoing adaptations of Islamic curricula to preserve ethical dimensions alongside technological advancements (Dalimunthe et al., 2025). Collectively, these insights portray semi-supervised generative AI not just as a technological advancement but as a catalyst for a paradigm shift in Islamic pedagogy that integrates rational, ethical, and spiritual dimensions harmoniously.

4. Conclusion

This study reveals an unexpected and previously undocumented finding: semi-supervised generative AI demonstrates a stronger and more consistent positive effect on Islamic and moral education than reported in earlier qualitative studies, with a moderate effect size ($d = 0.56$) that was only discovered through statistical synthesis. Surprisingly, the analysis shows that tools like ChatGPT and Gemini outperform newer AI systems such as Agnes AI and Cici, indicating that model maturity and dataset scale play a more significant role in shaping learning outcomes than presumed. Another striking insight uncovered during the review is that generative AI contributes not only to cognitive improvement but also to the enhanced ethical reasoning area previously believed to be resistant to automation.

Despite these compelling findings, the research is constrained by several limitations. The number of included studies (38) remains limited relative to the global development of AI, and only a small subset offers robust quantitative evidence. The cases examined predominantly originate from a few regions, with minimal representation across gender, age groups, school types, or levels of Islamic education, preventing broad generalization. Furthermore, methodological variation was narrow, most studies focused on experimental or quasi-experimental designs, with very few longitudinal or multi-institutional analyses. These constraints highlight the need for future research that

incorporates larger and more diverse samples, cross-regional comparisons, deeper investigations into semi-supervised learning mechanisms, and expanded case studies to produce a more comprehensive understanding of generative AI's pedagogical implications. With more extensive and systematic evidence, educational policymakers will be better positioned to design ethical, culturally grounded, and pedagogically sound guidelines for integrating generative AI into Islamic and moral education.

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