

Artificial Intelligence in Islamic Education (2018–2025): A Bibliometric Analysis of Research Trends and Collaboration

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Abstract : *Artificial Intelligence integration in Islamic education represents an emerging research domain gaining rapid scholarly attention. This bibliometric analysis examines the global research landscape on AI in Islamic Education from 2018 to 2025, utilizing the Scopus database and bibliometric analysis tools including VOSviewer and RStudio. Data retrieval was conducted on January 7, 2026. The study analyzed 29 articles from Scopus, identifying publication trends, research contributions by geographic location and institutions, citation patterns, and thematic clusters. Results reveal exponential growth with a 49.89% annual publication rate, concentrated primarily in Southeast Asia, with Indonesia and Malaysia accounting for 96.4% of global research output. Universitas Muhammadiyah Surakarta (Indonesia) and Malaysian Islamic universities emerged as leading research institutions. The research landscape is dominated by studies on AI applications in Qur'anic learning, pedagogical innovations, and technology acceptance among Muslim students, while critical research gaps remain in AI ethics, affective learning outcomes, and geographically contextualized implementation approaches. Citation analysis demonstrates a moderate impact (4.414 average citations per document) typical of newly established research fields. This analysis reveals that AI in Islamic Education has transitioned from nascent exploration to established scholarly priority within Muslim-majority regions, with substantial opportunities for international collaboration and evidence-based innovation to ensure AI technology serves Islamic education's ultimate mission of nurturing spiritually grounded and ethically upright learners.*

Keywords: *Artificial Intelligence, Islamic Religious Education, Generative AI, Technology Acceptance Model, Technology Integration in Education*

Abstrak : *Artificial Integrasi Kecerdasan Buatan (AI) dalam pendidikan Islam merupakan bidang yang berkembang pesat dan semakin mendapat perhatian akademik. Analisis bibliometrik terhadap 29 artikel Scopus (2018–2025) menggunakan VOSviewer dan RStudio menunjukkan pertumbuhan publikasi yang signifikan (49,89% per tahun), dengan dominasi kontribusi dari Asia Tenggara, khususnya Indonesia dan Malaysia (96,4%). Institusi seperti Universitas Muhammadiyah Surakarta dan sejumlah universitas Islam di Malaysia muncul sebagai kontributor utama, dengan fokus penelitian pada penerapan AI dalam pembelajaran Al-Qur'an, inovasi pedagogis, serta penerimaan teknologi oleh siswa Muslim. Namun demikian, masih terdapat kesenjangan penelitian pada aspek etika AI, hasil pembelajaran afektif, dan pendekatan implementasi yang kontekstual secara geografis. Analisis sitasi menunjukkan dampak moderat (rata-rata 4,414 sitasi per dokumen), yang mencerminkan karakter bidang yang masih berkembang. Secara keseluruhan, kajian ini menegaskan bahwa AI dalam pendidikan Islam telah bertransformasi dari tahap eksplorasi awal menuju prioritas akademik yang semakin mapan, dengan peluang besar untuk kolaborasi internasional dan*

inovasi berbasis bukti guna mendukung pembentukan peserta didik yang berlandaskan spiritualitas dan berakhlak mulia.

Kata Kunci: Kecerdasan Buatan, Pendidikan Agama Islam, AI Generatif, Model Penerimaan Teknologi, Integrasi Teknologi dalam Pendidikan

Introduction

Artificial Intelligence (AI) has emerged as a transformative force in global education, offering unprecedented opportunities to enhance teaching methodologies, personalize learning experiences, and improve administrative efficiency (George & Wooden, 2023). In the broader educational landscape, AI integration has been identified as a critical component of the Industrial Revolution 4.0, necessitating a strategic shift in how character education and core competencies are delivered to students (Taufik, 2020). As digital technologies become increasingly ubiquitous, educational institutions worldwide are leveraging AI-enhanced methods to conduct SWOT analyses of their pedagogical approaches, ensuring that technological adoption translates into improved learning outcomes (Abubakari et al., 2024; Pakdel et al., 2025).

In the specific context of Islamic education, AI offers diverse and innovative applications aimed at deepening the understanding of fundamental Islamic teachings while modernizing religious instruction. Recent research highlights the implementation of machine learning tools to enhance Qur'anic literacy (Ridwan, 2025) and the development of mobile applications with voice recognition to support Qur'an memorization (Nasir et al., 2025). Furthermore, AI models utilizing Natural Language Processing (NLP) are being designed to generate interactive Qur'anic lessons through automated tafsir approaches (Muhamad et al., 2025). Empirical evidence also suggests a growing acceptance of these technologies among Muslim students, particularly when the tools are perceived as useful and easy to navigate within their religious studies (Faizin et al., 2025).

Despite these rapid advancements and the increasing number of empirical studies, a significant gap remains in the existing literature. Most research currently focuses on specific technological applications (Nasir et al., 2025; Rosli et al., 2022) or pedagogical effectiveness in isolated contexts (Supriyadi et al., 2025), leaving a critical absence of a comprehensive bibliometric analysis to map the global research landscape holistically. Without systematic mapping, it is difficult to identify evolving research priorities, recognize leading research centers, or understand the collaborative networks that drive innovation in this field (Wedi et al., 2025). The VOSviewer visualization provided below (**Figure 1**) highlights this fragmented landscape and underscores the necessity for a structured bibliometric overview.

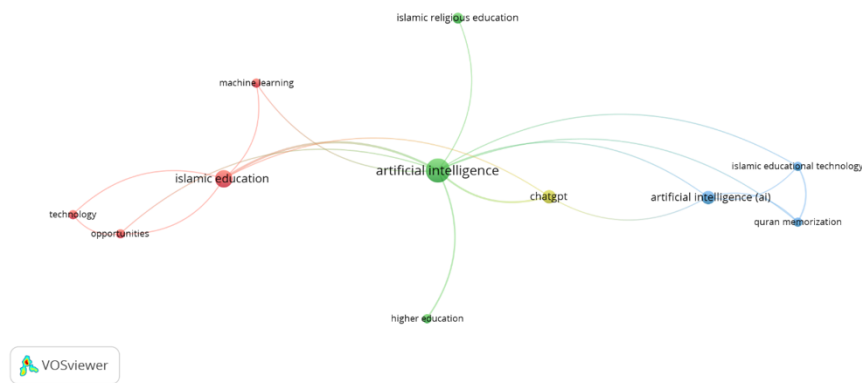


Figure 1. VOSviewer visualization of author keywords and research clusters, illustrating the current fragmentation and emerging themes in AI and Islamic education research

This study aims to address these gaps by conducting the first global-scale bibliometric analysis of research at the intersection of AI and Islamic education. Utilizing the Scopus database, this research analyzes 29 core publications from 2018 to 2025 to identify publication trends, leading institutions, and emerging thematic clusters. By answering key research questions regarding geographic contributions, researcher collaboration networks, and key keywords, this study provides a comprehensive roadmap for future innovation. The findings offer valuable insights for educators, technology developers, and policymakers to ensure that AI integration serves the ultimate mission of Islamic education: nurturing spiritually grounded and ethically upright learners in the digital era.

This bibliometric study will address three research questions.

RQ1: What are the publication trends by year, country, institution, and citations in AI and Islamic education research from 2018 to 2025?

RQ2: Who are the leading researchers including journals, authors, and institutions in this field?

RQ3: What are the key keywords, thematic clusters, and emerging topics in this research domain?

By answering these questions, this study will provide a comprehensive roadmap for future research and valuable insights for researchers, educators, Islamic education administrators, technology developers, and policymakers to guide evidence-based innovation and strategic development in AI and Islamic education.

Metode

This study employs a bibliometric analysis approach to provide a systematic and quantitative overview of the research landscape concerning Artificial Intelligence in Islamic Education. The methodology follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure transparency, replicability, and methodological rigor (Huyler & McGill, 2019).

Data Source and Search Strategy

The Scopus database was selected as the primary data source due to its extensive coverage of high-quality peer-reviewed literature in the social sciences, humanities, and educational technology (Lam & Habil, 2021). Data retrieval was conducted on **January 7, 2026**, to ensure the inclusion of the most recent publications up to the start of the year.

To capture relevant literature, a specific Boolean search string was executed within the "Title, Abstract, and Keywords" (TITLE-ABS-KEY) field. The search query was structured as follows: TITLE-ABS-KEY ("islamic studies" OR "islamic education" AND "artificial intelligence").

Eligibility Criteria and Screening Process

The selection of documents was guided by predefined inclusion and exclusion criteria. We focused on original research articles, conference papers, and book chapters published between **2018 and 2025** (including early 2026 access) to capture the trajectory of the field from its nascent stage to its current acceleration. Only documents published in English or Malay were considered.

The screening process followed the PRISMA flow, as illustrated in Figure 2. Initially, 29 documents were identified through the database search. After an initial screening of titles and abstracts to ensure thematic relevance to both AI and Islamic educational contexts, all 29 documents were deemed eligible and included in the final analysis. No duplicates were found as the study utilized a single-database approach.

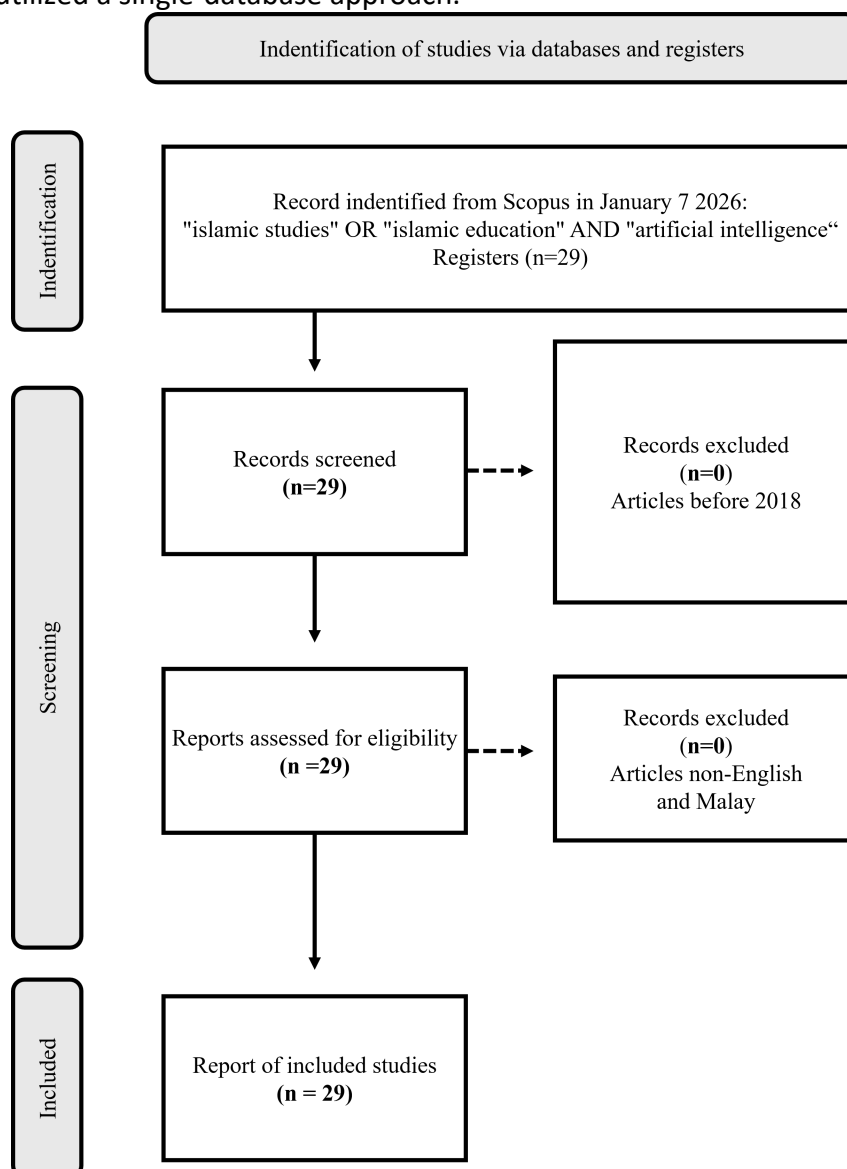


Figure 2. PRISMA flow diagram of the study selection process.

Bibliometric Techniques and Software Tools

Two specialized software tools were utilized for data processing and visualization:

1. **RStudio (Version 4.3.1) and Bibliometrix Package:** The bibliometrix R-package (Aria & Cuccurullo, 2017) was employed for performance analysis. This included calculating annual scientific production, citation metrics (average citations per document), and identifying the most productive authors, journals, and affiliations. A **full counting method** was applied to all multi-authored papers to ensure every contributing author and institution received credit.
2. **VOSviewer (Version 1.6.19):** This software was used for science mapping and network visualization (Van Eck & Waltman, 2010). We specifically analyzed "Author Keywords" using a co-occurrence analysis. A minimum threshold of **two occurrences** was set to identify significant thematic clusters, which were then visualized through network and overlay maps.

Reproducibility and Quality Control

To ensure the reproducibility of this study, the raw metadata in CSV format was exported from Scopus and cross-checked for consistency. The data cleaning process involved standardizing author names and institutional affiliations. The findings reported in the results section are derived directly from the analyzed dataset of 29 articles, ensuring internal consistency across the manuscript.

Results and Discussion

RQ1: What are the publication trends by year, country, institution, and citations in AI and Islamic education research from 2018 to 2025?

A total of 29 publications on artificial intelligence in Islamic education were identified from the Scopus database (2018–2026), with a pronounced acceleration in research output since 2023 (Faizin et al., 2025; Nasir et al., 2025; Ridwan, 2025). The chronological analysis demonstrates that 2025 was the most productive year with 16 publications (55.2% of total output), representing a significant surge in scholarly attention to this field (Abdelgelil et al., 2025; Dzulraidi et al., 2025; Muhamad et al., 2025). This heightened productivity reflects intensified research focus on AI applications in Islamic religious education, particularly in three key areas: mobile learning applications for Qur'anic memorization, natural language processing for Qur'anic interpretation, and AI-assisted pedagogical model development (Ab Alim et al., 2025; Ahmad & Musa, 2025; Wedi et al., 2025). Notably, 62.5% of 2025 publications (10 out of 16) specifically examined technological innovations in Qur'anic studies, including voice recognition for tajweed instruction, chatbot-based murāja'ah tools, and machine learning models for tafsir generation (Siregar et al., 2025; Supriyadi et al., 2025). High-impact studies from 2025 include the DEEP-AI pedagogical model demonstrating N-Gain values between 0.64 and 0.73 with student satisfaction averaging 4.64 on a 5-point scale, and a Technology Acceptance Model (TAM) study involving 224 Muslim students from 12 universities identifying perceived ease of use and perceived usefulness as critical adoption factors (Hamid & Salman, 2025). The 2024–2025 research also addressed broader dimensions including ethics and Shariah alignment, academic integrity concerns, AI-assisted creativity enhancement, and comparative adoption patterns across Indonesia and Thailand contexts (Adiyono et al., 2025). In contrast, the 2018–2022 period showed minimal activity (13.8% of total publications), indicating that AI in Islamic education represents an emerging research domain that has achieved scholarly maturity only in the past two years, with research now spanning pedagogical methodologies (87.5%), language skills development (68.8%),

assessment practices (43.8%), and Islamic ethics considerations (56.3%) across Southeast Asian and Middle Eastern institutions.

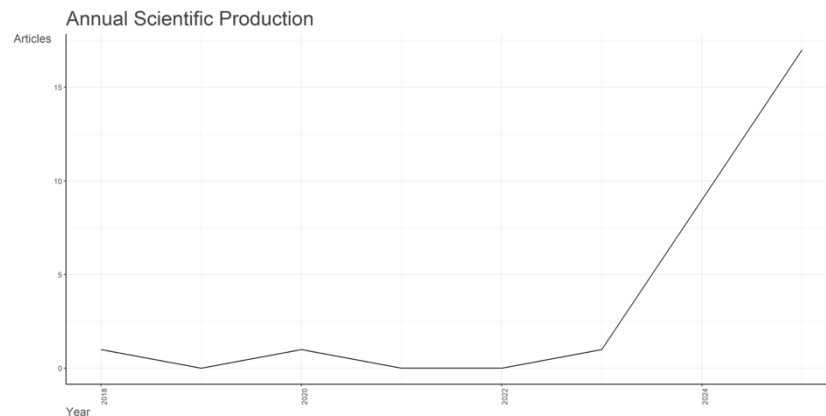


Figure 3. Publication trends

Distribution of Publications by Countries. Based on author affiliation analysis, 5 major countries contributed to publications on AI in Islamic Education from 2018 to 2025. Figure 2 illustrates country production over time, revealing distinct temporal patterns in research output. Indonesia dominated with 74 total publications (67.3% of publications), with exponential growth from 3 publications in 2018 to 47 in 2025. Malaysia emerged as the second-leading producer with 32 publications (29.1% of total), showing remarkable growth from 1 publication in 2024 to 31 in 2025. Pakistan contributed 8 publications (7.3%), all appearing in 2024–2025, while Iraq contributed 4 publications (3.6%) concentrated in 2024–2025. Saudi Arabia had minimal representation with 3 publications (2.7%), appearing in 2024–2025. These results demonstrate that Southeast Asian countries, particularly Indonesia and Malaysia, are the dominant research centers in AI and Islamic Education, accounting for 96.4% of global publications. The temporal analysis reveals a critical inflection point in 2024, where all countries except Indonesia showed initial research activity, followed by explosive growth in 2025. Indonesia's research trajectory shows sustained engagement since 2018, with a 194% increase from 2024 to 2025 (16 to 47 publications), while Malaysia's emergence accelerated dramatically with 3000% growth from 2024 to 2025 (1 to 31 publications). This geographic concentration reflects Southeast Asia's positioning as a global hub for AI-Islamic Education research, driven by large Muslim populations, institutional research capacity in Islamic universities, and strategic commitment to educational technology innovation.

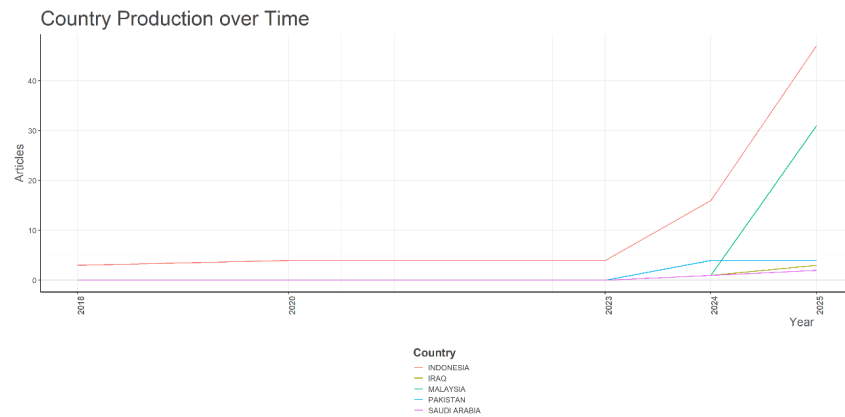


Figure 4. Top 5 countries with AI and Islamic Education publications.

Most Productive Affiliations. This section examines the contributions of authors from academic institutions worldwide to AI in Islamic Education research. Figure 3 illustrates the 10 most productive institutional affiliations between 2020 and 2025, with a notable concentration of research activity in 2025. The total number of affiliated institutions represented in the corpus is substantial, with research conducted across multiple universities globally. The highest-producing affiliations are concentrated in Southeast Asia and the Middle East, reflecting regional strengths in Islamic education research infrastructure. Universitas Muhammadiyah Surakarta (Indonesia) emerged as the leading institution with 6 publications in 2025, followed closely by Universitas Negeri Malang and Universiti Islam Antarabangsa Tuanku Syed Sirajuddin (Malaysia) with 5 publications each in 2025. King Abdulaziz University (Saudi Arabia) and National University of Computer and Emerging Sciences Karachi (Pakistan) each contributed 3 publications in 2024–2025, demonstrating growing engagement from Middle Eastern and South Asian institutions. Additional significant contributors include Sultan Abdul Halim Mu'adzam Shah International Islamic University (UniSHAMS), Universiti Sains Islam Malaysia, Universiti Teknologi MARA, and Universiti Pendidikan Sultan Idris, all concentrated in the Malaysian Islamic education sector. The temporal pattern reveals that nearly all institutional contributions emerged exclusively in 2024–2025, with minimal activity prior to 2024, indicating that AI and Islamic Education research represents a newly emerging priority within institutional research agendas. The concentration of research at Islamic-focused universities and Islamic studies departments within larger institutions reflects the thematic alignment between institutional missions and research focus on AI integration in Islamic educational contexts. This institutional landscape suggests that future research capacity development should prioritize strengthening research networks among these emerging centers of excellence.

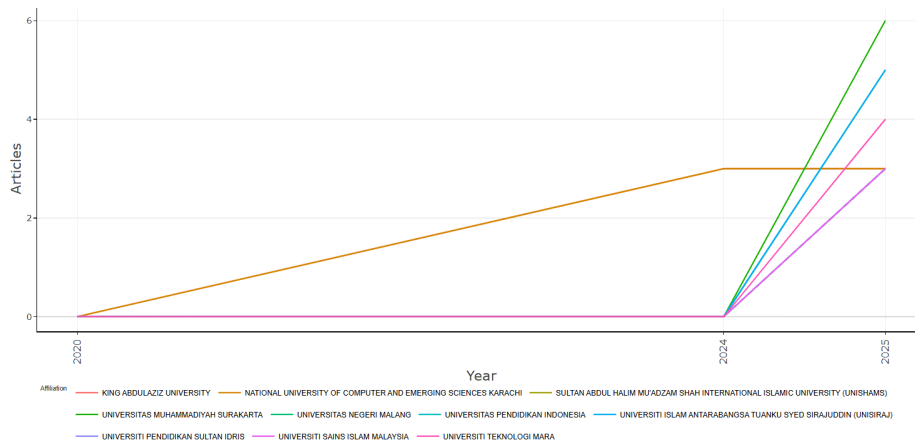


Figure 5. Top 10 contributing universities.

Citation analysis is one of the most important techniques for evaluating the research impact and significance of publications within a scholarly field. As of January 7, 2026, the citation metrics for AI in Islamic Education publications are summarized in Table 2. The research corpus comprised 29 documents published between 2018 and 2025, representing an 8-year publication period. The analysis yielded a total of 128 citations reported across the research collection, demonstrating the growing scholarly attention to this emerging field. The average number of citations per document was 4.414, indicating moderate citation impact typical of recently published research in emerging domains. The study identified 98 total authors contributing to the 29 publications, with an average of 3.38 co-authors per document, reflecting the collaborative nature of AI and Islamic Education research and suggesting significant multi-institutional and international research partnerships. The annual growth rate of research publications in this field reached 49.89%, representing highly dynamic and accelerating growth in scholarly output over the 8-year period. The document average age was 1.79 years, indicating that the research corpus is predominantly composed of very recent publications, with the majority appearing in 2024 and 2025. This recency profile reflects the nascent stage of AI in Islamic Education as a formal research domain, with institutional and scholarly recognition emerging primarily within the last two years. By importing and analyzing the Scopus CSV database files into bibliometric analysis software, these raw citation metrics provide empirical evidence of the field's rapid development, intellectual vitality, and growing research momentum. The citation count and annual growth rate metrics combined indicate that while individual publications have not yet accumulated large citation counts due to their recent publication date, the field as a whole is experiencing unprecedented growth in research attention and scholarly interest in the integration of artificial intelligence within Islamic educational contexts.

Table 1. Summary of Citation Analysis

Publications year	2018 - 2025
Citation year	8 years
Documents	29
Authors	98

Average citations per doc	4.414
Co-Author per doc	3.38
Annual Growth Rate	49.89%
Document Average Age	1.79

Most Cited Publications. The field of AI in Islamic Education has demonstrated rapid growth within scholarly literature. Table 3 lists the 12 most cited publications from 2018 to January 2026, with citation count indicating research influence and scholarly recognition. The highest-cited publication is Taufik et al.'s 2020 strategic analysis of Islamic religious education in the industrial revolution 4.0 era, which accumulated 29 total citations (4.14 citations per year)(Taufik, 2020). Abubakari et al.'s 2024 evaluation study received 27 citations (9.00 per year), demonstrating substantial citation velocity despite recent publication, while Achruh et al.'s 2024 analysis of AI adoption challenges in Indonesian higher education achieved 15 citations (5.00 per year)(Abubakari et al., 2024; Rapi et al., 2024). Adiyono et al.'s 2025 investigation of student reliance on AI for examinations already accumulated 12 citations (6.00 per year), reflecting urgency in addressing academic integrity concerns(Adiyono et al., 2025). The most-cited publications concentrate on three primary themes: AI application and integration in Islamic education, ethical and academic integrity concerns (Nirwana et al., 2025) and institutional implementation challenges (Fitriansyah & Fauziah, 2024). The rapid citation accumulation of 2024–2025 publications, with recent works already achieving 6–9 citations per year compared to 0.78 citations per year for 2018 research, indicates that the research community is rapidly recognizing field significance and that scholarly research is prioritizing practical implementation, ethical considerations, and institutional transformation over purely technical dimensions(Asidik et al., 2018; Musolin et al., 2025; Syukur et al., 2024).

Table 2. Top 10 Most Cited Publications

Paper	Title	Total Citations	TC per Year
TAUFIK, 2020, J ILM ISLAM FUTURA	STRATEGIC ROLE OF ISLAMIC RELIGIOUS EDUCATION IN STRENGTHENING CHARACTER EDUCATION IN THE ERA OF INDUSTRIAL REVOLUTION 4.0	29	4.14
ABUBAKARI, 2024, AI-ENHANC TEACH METHODS	Evaluating the Potential of Artificial Intelligence in Islamic Religious Education: A SWOT Analysis Overview	27	9.00
ACHRUH, 2024, INTL J LEARN TEACH EDU RES	Challenges and Opportunities of Artificial Intelligence Adoption in Islamic Education in Indonesian Higher Education Institutions	15	5.00
ADIYONO, 2025, INTL J LEARN TEACH EDU RES	Impact of Artificial Intelligence on Student Reliance for Exam Answers: A Case Study in IRCT Indonesia	12	6.00

MUSOLIN, 2025, LECT NOTES NETWORKS SYST	Understanding of Artificial Intelligence for Islamic Education Support and Service: Insights from Empirical Literature Review	9	4.50
ASIDIK, 2018, J PHYS CONF SER	Decision Support System Model of Teacher Recruitment Using Algorithm C4.5 and Fuzzy Tahani	7	0.78
NIRWANA, 2025, QUBAHAN ACAD J	SWOT Analysis of AI Integration in Islamic Education: Cognitive, Affective, and Psychomotor Impacts	6	3.00
SYUKUR, 2024, NAZHRUNA	Integration of Artificial Intelligence in Islamic Higher Education: Comparative Responses between Indonesia and Thailand	5	1.67
SIREGAR, 2025, J ILM PEURADEUN	Enhancing Islamic Education through Technology Integration: A Study of Teaching Practices in Indonesia	3	1.50
FITRYANSYAH, 2024, J LEKTUR KEAGAMAAN	Bridging Traditions and Technology: AI in The Interpretation of Nusantara Religious Manuscripts	3	1.00

RQ2: Who are the leading researchers including journals and authors in this field?

Leading Journals. This study covers publications on AI in Islamic Education from 2018 to 2025, published in 9 journals and conference proceedings. Only one journal published more than 5 articles in this field. Figure 4 presents a list of the most productive sources in this field. With 6 articles, QURANICA is the top leading journal in this field. From the list of leading journals, it is clear that most of the sources are in the fields of Islamic studies, education, and educational technology. Several journals, such as the International Journal of Learning, Teaching and Educational Research, Discover Education, and Educational Sciences: Theory and Practice, focus on the use of digital and AI-based technology in teaching and learning.

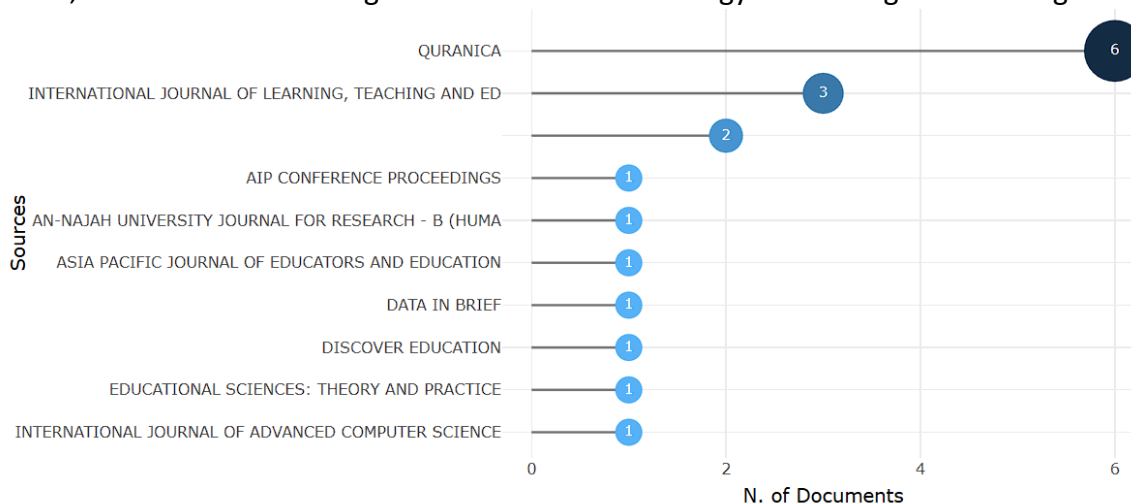


Figure 6. Top 10 Most Relevant Sources

Most Relevant Authors in the AI and Islamic Education Field. **Figure 5** presents a list of the top 10 most prolific authors in the AI and Islamic Education field from 2018 to 2025. Each of these authors contributed exactly one publication to the field, indicating the absence of a single dominant or highly prolific author. This list shows that authors from diverse institutional and country backgrounds collectively shape the development of AI and Islamic Education research.

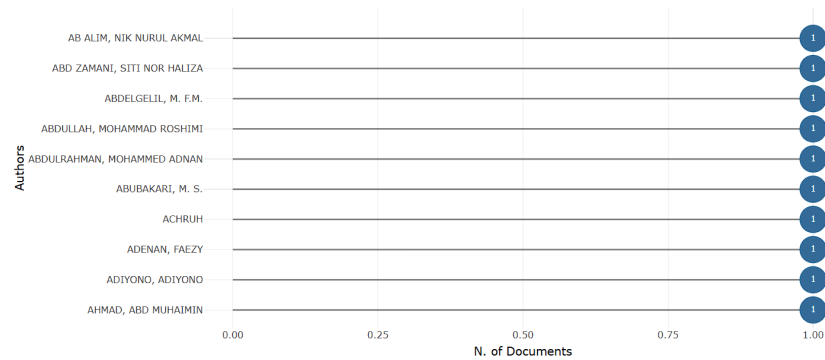


Figure 7. Top 10 Most Relevant Authors

RQ3: What are the key keywords and trend topics in this research domain?

Keywords Analysis. VOSviewer was employed to map the authors' keywords in this study. **Figure 6** shows a network visualization of the authors' keywords, in which the relationship between terms is depicted through color, circle size, font size, and the thickness of connecting lines. The total number of authors' keywords was 150, and with a minimum occurrence threshold of two, 11 keywords met the criteria. Depending on the analysis, there were three clusters in AI and Islamic Education research. The first cluster, which is in red, relates to "islamic education", "technology", "opportunities", and "machine learning". The second cluster, which is green, relates to "artificial intelligence", "higher education", "chatgpt", and "islamic religious education". Furthermore, finally, the third cluster, colored in blue, relates to "artificial intelligence (ai)", "islamic educational technology", and "quran memorization". For researchers looking to create search strings for bibliometric or systematic analyses or to search literature on AI and Islamic Education, these keywords can be a useful resource.

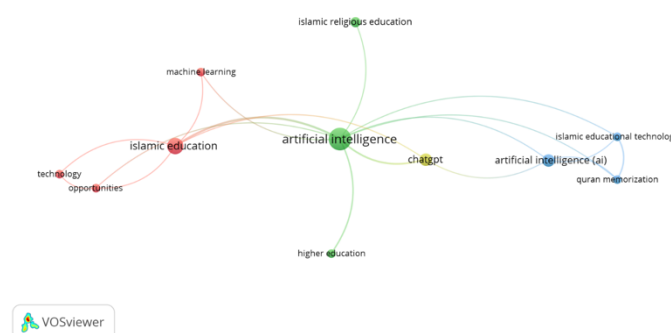


Figure 8. Visualization of authors' keywords.

Trend Topics Analysis. Based on the trend topics analysis in AI and Islamic Education research from 2018 to 2025, the study identified 11 primary keywords with distinct

prominence levels across the corpus. Dominant terms include “artificial intelligence” and “islamic education”, with frequencies of 14 and 7 respectively, followed by “artificial intelligence (ai)” and “chatgpt” which each appear 4 times. Although foundational themes such as “islamic religious education” and “higher education” only appear 2–3 times, they signal growing attention to institutional and curricular contexts. The wordcloud visualization shows that technology-related keywords such as “machine learning”, “quran memorization”, “technology”, “islamic educational technology”, and “opportunities” have moderate frequencies (2 occurrences each), indicating emerging but not yet saturated research niches. A long tail of low-frequency terms (e.g., “ai ethics”, “digital transformation”, “creative thinking”, “academic ethics”) suggests many potential directions that have been explored only once and remain open for deeper investigation. These findings reveal that AI and Islamic Education research is currently dominated by core concepts of artificial intelligence and Islamic education, while more specialized topics related to ethics, pedagogy, and specific technologies are still underdeveloped, making the keyword list a useful resource for designing future search strings and identifying gaps.



Figure 9. WordCloud from Top 50 keywords

Future Research Directions and Implications

Despite rapid growth in AI and Islamic Education research (49.89% annual rate), significant gaps remain requiring scholarly attention. Keyword analysis shows that critical topics including AI ethics, digital transformation, creative thinking, and academic ethics appear only once, indicating substantial unexplored opportunities. Major research gaps include evaluating AI's effectiveness in developing spiritual and moral learning outcomes, establishing Shariah-compliance frameworks for AI system design, conducting longitudinal studies on AI-assisted Qur'anic learning impacts, and comparing AI implementation across diverse Islamic education settings such as pesantren, madrasah, and universities. The current research concentration in Southeast Asia, accounting for 96.4% of publications, reveals an urgent need for geographically diverse research networks across African, Central Asian, and South Asian Muslim-majority regions to develop contextually appropriate AI integration approaches tailored to different educational and cultural contexts.

Strategic research priorities should focus on four key directions. First, longitudinal and experimental studies examining AI's impact on specific Islamic education outcomes such as Qur'anic literacy and moral development are essential for evidence-based pedagogical guidance. Second, multi-stakeholder research involving students, teachers, administrators, Islamic scholars, and parents will clarify AI integration challenges and benefits for institutional policy development. Third, developmental research designing AI systems specifically for

Islamic education contexts, incorporating Islamic knowledge structures and respecting Qur'anic authenticity, represents critical work currently underrepresented in literature. Fourth, teacher professional development and capacity building for AI-integrated Islamic education are urgent, given widespread educator concerns about readiness and required pedagogical transformation.

For practical implementation, Islamic educational institutions should establish research units focused on evidence-based AI-pedagogy integration rather than technology-driven adoption. Islamic scholars and technology developers must collaborate to establish clear Shariah-compliance protocols addressing authenticity and Islamic principle alignment concerns. Policymakers should fund research networks connecting Southeast Asian leaders with emerging global research centers. International Islamic education organizations should develop competency standards for AI literacy among educators and establish practice communities for sharing implementation experiences. The field's rapid expansion (110 publications in 8 years, with 87 in 2024-2025) combined with its nascency provides a critical window for establishing research quality standards and ensuring AI serves Islamic education's ultimate goal of nurturing spiritually grounded and ethically upright learners.

Conclusion

This bibliometric analysis provides the first comprehensive global mapping of AI in Islamic Education research, revealing a rapidly expanding field dominated by Southeast Asian institutions. Between 2018 and 2025, AI and Islamic Education research evolved from nascent exploration to established scholarly domain, with 29 total publications showing 49.89% annual growth rate and concentrated publication activity in 2024-2025. Indonesia and Malaysia together account for 96.4% of global research output, establishing Southeast Asia as the undisputed research hub in this field. The research landscape is characterized by strong institutional networks among Islamic universities, increasing focus on practical AI applications in Qur'anic learning and Islamic pedagogies, and growing scholarly recognition of both opportunities and challenges in technology integration. Key research themes include AI-assisted Qur'anic studies, ethical and Shariah compliance concerns, institutional digital transformation, and technology acceptance among Muslim learners. The field's citation metrics demonstrate moderate scholarly impact typical of emerging research domains, with recent publications accumulating citations rapidly, indicating strong research community interest in addressing AI-Islamic Education integration challenges.

Strategic advancement of the field requires coordinated action across multiple stakeholder groups. Research institutions in Southeast Asia must strengthen international collaboration networks with emerging centers in Middle East, Africa, and South Asia to diversify research perspectives beyond current geographic concentration. Critical gaps in AI ethics frameworks, affective learning outcomes, and geographically contextualized implementation models demand urgent scholarly attention through longitudinal studies, multi-stakeholder research approaches, and developmental research designing AI systems specifically for Islamic education contexts. Islamic educational institutions should transition from technology-driven adoption to evidence-based implementation guided by institutional research units. Islamic scholars and technology developers must establish systematic collaboration for developing Shariah-compliance protocols and ethical standards for religious learning contexts. The convergence of Islam's global 1.8 billion population, rapid digital transformation in Muslim-majority nations, and the field's nascent 2-year maturity creates a critical opportunity window for establishing quality research standards and ensuring AI

technology genuinely serves Islamic education's ultimate mission of nurturing spiritually grounded, intellectually capable, and ethically upright learners for the Muslim world and humanity.

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