

Factors and Challenges Driving the Use of Artificial Intelligence (AI) In the Teaching and Learning of Islamic Education: A Systematic Literature Review

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ABSTRACT

The integration of Artificial Intelligence (AI) in education is expanding rapidly; however, studies systematically synthesizing its driving factors and challenges within the context of Islamic Education remain limited. This study aims to identify and synthesize the factors influencing the utilization of AI and the challenges faced by Islamic Education teachers. The methodology employs a Systematic Literature Review (SLR) approach based on the PRISMA 2020 guidelines, searching the Scopus and Google Scholar databases from 2016 to 2025. Following a rigorous screening process, 10 high-quality articles were selected and analyzed thematically. The findings indicate that the primary drivers for AI adoption encompass dimensions of operational efficiency and productivity enhancement, adaptive personalized learning, and the elevation of student interactivity and motivation via voice technology. Nevertheless, the study also uncovers critical challenges, such as ethical and data privacy issues, epistemological risks regarding the authenticity of sources and the authority of revealed knowledge (wahyu), as well as digital literacy gaps. The implications of this study highlight an urgent need to develop an Islamic AI ethical framework grounded in Maqasid Syariah to balance technological advancement with spiritual integrity.

Keywords: Artificial Intelligence (AI), Islamic Education, Systematic Literature Review (SLR), PRISMA Protocol, Digital Pedagogy.

INTRODUCTION

Artificial Intelligence (AI) is increasingly expanding within the field of education and has transformed teaching and learning approaches globally. The development of AI technology has opened new opportunities in instructional material preparation, learning content generation, automated assessment, and the creation of more interactive and flexible learning experiences. In an educational context, the use of AI is seen as having the potential to increase teacher efficiency, save time, and enrich the student learning process. This development has consequently influenced the field of Islamic Education, as teachers and students begin to leverage AI for preparing notes, constructing learning activities, translating texts, generating teaching ideas, and accessing religious information more rapidly (Amsor & Hamzah 2026; Rahman et al. 2024). Furthermore, advanced artificial intelligence technologies, such as convolutional neural networks (CNN) and recurrent neural networks (RNN), are beginning to be used empirically to check tajwid rules and recognize the voices of Quran reciters (Al-Omari et al. 2025; Shaiakhmetov et al. 2025).

However, the utilization of AI in Islamic Education possesses its own unique characteristics because this field emphasizes not only the transmission of knowledge, but also elements of faith (akidah), values, morals (akhlak), the authenticity of religious sources, and ethical considerations in technological application (Hago Elmahdi et al. 2025; Mustaqbal & Herawan 2026). A review of the literature indicates that studies related to AI in education have been rising over recent years. Most prior studies have focused on user perceptions of AI, the readiness levels of teachers and students, technology acceptance, the effectiveness of AI use in learning, and the associated

challenges and ethical issues (Hakim & Anggraini 2024; Hosni et al. 2023). At the Malaysian primary school level, readiness studies show that educators are beginning to prepare for adapting AI to support differentiated learning, yet they still face digital competency issues (Attarbawiy, 2024).

Nevertheless, findings related to the factors driving AI utilization remain fragmented and scattered across various studies with different contexts. Additionally, the majority of past studies have leaned toward general education and technical fields, whereas research specifically examining the factors driving AI integration into the teaching and learning of Islamic Education remains scarce (Ajmain et al. 2023). The lack of a systematic literature synthesis leaves a comprehensive understanding of the factors influencing AI adoption in the context of Islamic Education unclear. This situation can make it difficult for educational institutions, policymakers, and educators to plan AI integration strategies that are appropriate, ethical, and aligned with the objectives of Islamic Education (Yusoff et al. 2023).

Accordingly, this study aims to identify and synthesize the factors driving the use of AI in the teaching and learning of Islamic Education using a Systematic Literature Review (SLR) approach. This study is executed based on the PRISMA 2020 guidelines through a process of identification, screening, eligibility assessment, and thematic analysis of relevant articles. This systematic approach is vital to transparently map out research directions, pedagogical methods, and learning outcomes (Ajmain et al. 2023). This study is expected to provide a more systematic overview of the main drivers of AI utilization in Islamic Education, while contributing to research development, educator training, and the planning of more effective and ethical AI integration strategies within the discipline (Amsor & Hamzah 2026; Hago Elmahdi et al. 2025).

Problem Statement

Although the issue of AI utilization in Islamic Education in Malaysia is gaining traction, most previous studies have converged on general discussions regarding technology acceptance, AI effectiveness in education, or broad ethical challenges (Hosni et al. 2023; Taha & Ajmain. 2025). A close inspection of the existing literature reveals that research specifically focusing on the factors driving AI adoption within the context of Islamic Education in Malaysia remains limited and has not been systematically synthesized (Ajmain et al. 2023).

Furthermore, past research findings exhibit inconsistencies regarding the factors that influence AI usage in teaching and learning (PdP). Some local studies highlight pragmatic factors such as time-saving and the alleviation of teacher workloads as the primary drivers, while other studies demonstrate that teacher decisions are heavily influenced by 21st-Century Learning (PAK-21) demands, school infrastructure readiness, and personal digital literacy levels.

Most existing acceptance models have also been developed within Western, secular frameworks, thereby creating a contextual gap by ignoring the influence of Ministry of Education Malaysia (KPM) policies, the unique ecosystem of Islamic religious or pondok schools, and government digitalization initiatives like the Digital Champion Teacher program.

If this gap is not addressed immediately, the integration of AI into Islamic Education in Malaysia risks occurring without a foundational policy anchored in clear empirical evidence. This could lead to AI tools being used merely to follow current trends or fulfill cosmetic teaching requirements, without delivering a genuine impact on the quality of religious understanding and students' character development.

In addition, failing to identify these driving factors systematically will hinder the ministry's efforts to design targeted teacher training programs. In the long run, this issue not only exposes the Islamic Education system in Malaysia to academic integrity risks but could also jeopardize the authenticity and integrity of transmitting religious knowledge, which forms the core identity of future generations.

Research Purpose

This study aims to synthesize findings from various past studies to provide a holistic overview of AI utilization factors in teaching and learning, alongside the arising ethical challenges. Through this analysis, it is hoped that

the study can serve as an important reference for policymakers, educational institutions, and educators to formulate effective technology integration strategies aligned with Islamic values.

Research Objectives

1. To identify the level of AI content that drives its utilization in teaching and learning?
2. To determine the frequency level of Artificial Intelligence (AI) application in teaching and learning?
3. To understand the level of ease of use of Artificial Intelligence (AI) in teaching and learning?

Research Questions

1. What is the level of AI content that drives its utilization in teaching and learning?
2. What is the frequency level of Artificial Intelligence (AI) application in teaching and learning?
3. What is the level of ease of use regarding the application of Artificial Intelligence (AI) in teaching and learning?

METHODOLOGY

This study takes the form of a systematic literature review (SLR) grounded in past research findings that underwent a screening process to identify the factors influencing the use of artificial intelligence (AI) and the challenges encountered. This systematic literature review was executed based on the PRISMA 2020 guidelines. The application of PRISMA is a critical methodology as it provides standards that guarantee transparency, reliability, and quality control throughout the review process (Tedja et al. 2024).

In this study, all articles involving the factors affecting the use of artificial intelligence (AI) in the teaching and learning of Islamic education were identified using the Scopus and Google Scholar databases from 2016 to 2025, representing the latest ten years. The Scopus database was selected due to its high-quality indexing system and strict journal selection process, while Google Scholar was utilized to broaden the reach of relevant academic literature (Gali et al. 2017).

Table 1. Selection Criteria

Criteria	Inclusion	Exclusion
Literature Type	Journal articles, conference papers, and reports.	Books, theses, literature reviews, and standalone books.
Language	Malay and English.	Languages other than Malay and English.
Indexing	Journals indexed in Scopus and Google Scholar.	Journals not indexed or in unrecognized databases.
Timeframe	Studies published within the last 10 years.	Studies published before the last 10 years.
Research Focus	Studies involving the use of AI and the challenges faced by Islamic Education teachers in using AI.	Studies irrelevant to the research requirements.
Search Keywords	“Kecerdasan Buatan”, “AI”, “Pendidikan Islam”, “Artificial Intelligence in Education”, “AI in Islamic Education”.	Keywords other than those specified.

Article Selection Process

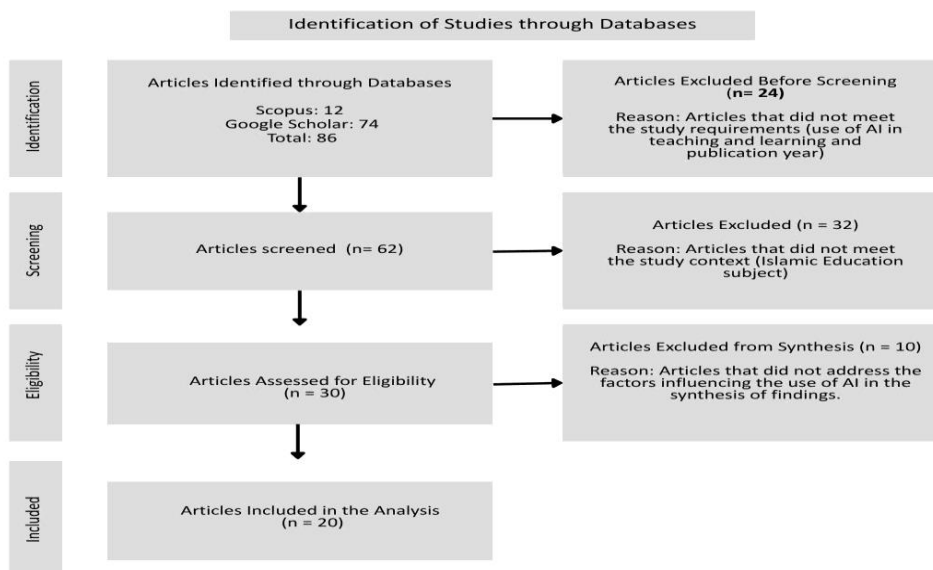
The two databases used in the article selection process were Scopus and Google Scholar. The article search was conducted in April 2026. Based on these two databases, a total of 10 articles were identified as fulfilling the article selection criteria using the predetermined keywords shown in Table 2.

Table 2: Article Selection Databases

Database	Keywords	Articles Meeting Criteria
Scopus	"AI" OR "Artificial Intelligence in Education" OR "AI in Islamic Education".	12
Google Scholar	"kecerdasan buatan" OR "pendidikan islam" OR "AI" OR "Pengajaran dan pembelajaran"	74

Based on the chosen keywords, a total of 86 articles were discovered across the two databases. For the literature search strategy executed using the Scopus database, the researchers leveraged AI-driven search assistance functionalities available within the system to identify additional keywords and relevant articles aligned with the study's focus. However, the search process required the discovered articles from both databases to be screened first according to publication year, literature type, language, indexing status, research focus, and study relevance. Figure 1 illustrates the article selection process based on the PRISMA protocol.

Figure 1: PRISMA 2020



Out of the 86 articles initially identified, non-journal materials such as proceedings and books, non-Malay or non-English language publications, and articles without full-text access were excluded. Following this, the researcher filtered the remaining articles using inclusion and exclusion criteria based on article titles, abstracts, and meticulous reading. Ultimately, 10 articles deemed relevant and meeting the criteria were filtered and identified. The researcher utilized the PRISMA 2020 protocol during the article selection process.

Article Quality Assessment

An article quality assessment process was executed to ensure that the chosen articles were of high quality and appropriate for the study. This quality assessment was conducted based on references from Mullet et al. (2017), as displayed in Table 3. According to Mullet et al. (2017), selecting articles with a high score of 14 and above

is regarded as a valid practice to guarantee reliability and validity in literature review synthesis. Therefore, based on that assessment, the 10 selected articles are of high quality and suitable for use in this study.

Table 3: Article Quality Assessment

No	Author / Year	Purpose & Objectives	Literature Review	Theory & Conceptual Framework	Sampling	Methodology	Findings & Discussion	Significance	Total Score
1	Tumiran et al. (2025)	4	4	2	4	4	4	4	27
2	Nurul Thaqifah & Setiawan (2024)	4	3	4	4	4	4	4	27
3	Tengku Fatin & Hafizhah (2025)	4	4	4	4	4	3	4	27
4	Dahliyah (2024)	4	4	4	4	4	4	4	28
5	Khairulnazrin et al. (2025)	4	3	4	4	4	3	4	26
6	Nilna Azizatus et al. (2024)	4	4	4	4	4	4	4	28
7	Mehmet Birgun (2026)	4	3	3	4	4	4	4	26
8	Mohamed Fathy et al. (2025)	4	4	3	4	4	3	3	25
9	Rehan & Herdi (2023)	4	4	3	4	4	4	3	26
10	Andri Nirwana et. (2025)	4	3	4	4	4	3	4	26
11	Ridhwa Darmawaty et.al (2026)	4	4	3	4	4	4	3	26
12	Agus Suryana (2025)	4	4	3	4	4	3	3	25
13	H.L.M Mohideen (2025)	4	4	3	4	4	3	3	25
14	Mohammad Soleh et.al (2025)	4	4	3	4	4	3	3	25
15	Ahmad Maghfurin et al. (2026)	4	4	3	4	4	4	3	26
16	Arqawi et al., (2025)	4	4	4	4	4	3	4	27
17	Nursani et.al (2025)	4	4	4	4	4	4	4	28

18	Eka pariyanti et. al (2024)	4	3	4	4	4	3	4	26
19	Al-Fadhli, S., & Al-Sharhan, A (2025)	4	4	4	4	4	4	4	28
20	Kyle & Omar (2025)	4	3	3	4	4	4	4	26

Article Collection and Analysis Process

Analysis was conducted after all articles met the selection criteria according to PRISMA 2020 and the quality assessment according to Mullet et al. (2017). The selected articles were analyzed thematically to answer the research questions. Thematic analysis is a data analysis technique used in conducting research. This analysis is applied to qualitative research with descriptive data collection to derive study conclusions (Braun & Clarke 2006). The article analysis was executed based on components of research design, GeoGebra effectiveness, skills utilized, and the mathematics domains focused on. Table 4 below shows the list of articles analyzed thematically.

Table 4: Article Analysis

No	Article	Research Methodology	Factors of AI Usage in the Study	Challenges of AI Usage in the Study	Research Gap	Author's Recommendations
1	Empowering the Naqli and Aqli-Based Artificial Intelligence (AI) Foundation Education Model in the Era of Globalization. Nurul Thafiqah & Setiyawan (2024).	Qualitative	Increased Efficiency and Productivity; Ease of Learning Access; Interactive Learning: AI Quran Learning Platform; Inclusive Education.	Data Misuse & Privacy; Threats to Honor (Fitnah); Lack of Religious Foundation; Awkward New Norms; Lack of Specific Guidelines.	Lack of Islamic Values Integration.	Application of Naqli and Aqli principles; Data transparency in guideline execution.
2	The Use of Artificial Intelligence (AI) in Teaching the Field of Quran in Primary Schools. Tengku Fatin & Hafizhah (2025).	Qualitative	Interactivity and Widespread Access; Specific AI Applications in Quranic Education: voice recognition technology, memorization and reading apps.	Implementation still faces constraints like teacher tech literacy levels, alignment of AI content with Islamic values, and lack of official guidelines.	Empirical approach and small population size; Study data showing teacher readiness levels for tech support.	Future studies are recommended to involve empirical approaches and larger populations.
3	Potential of Artificial Intelligence (AI) in the Malaysian Education System. Tumiran et al. (2025).	Qualitative	Personalized learning; Interactive learning experiences; Accessibility and inclusiveness; Improved student performance; Software and app development; Chatbot or virtual tutor usage.	Concerns over data privacy intrusion and security; lack of authority; potential bias.	Framework policies and ethics grounded in Islamic values; Significant research gap in understanding AI integration in Malaysian education.	Empirical research to understand the practical implications of AI in classrooms; Development of ethical guidelines.
4	Understanding and Use of Artificial Intelligence (AI) in Preschool Teachers' Teaching and	Quantitative	Teacher Understanding as a Main Factor; Policy and Infrastructure	Limited application as most preschools have not fully implemented AI technology in teaching; Lack of tech	Lack of tech access and weak infrastructure	Need for clear policies and guidelines

	Learning in Semporna District. Dahliyah Abdul Jalil (2024).		Support; Interactive and Adaptive Learning.	access and weak infrastructure support act as barriers.	support act as barriers.	regarding AI use.
5	Integration of Artificial Intelligence in Mobile Applications: Innovations and Challenges in Supporting Quranic Memorization and Murajaah. Khairulnazrin Nasir et al. (2025).	Qualitative	Democratization of Access and Accessibility; Empowerment of Self-Directed Learning; Tech Innovation in Quranic Education (ASR voice recognition, adaptive and personalized learning).	Accuracy and authority of use; Data privacy across different platforms; Over-dependence.	Separation between apps checking memorization accuracy versus phonetic pronunciation accuracy; Lack of contextual understanding and diverse Qira'at support.	Development of specialized chatbots for specific areas in Islamic studies.
6	Metamorphosis Of Islamic Religious Education Learning Method: Classic Approach Converted By Artificial Intelligence (AI). Nilna Azizatus et al. (2024).	Qualitative	Personalized and Adaptive Learning; Increased Learning Effectiveness; Accessibility and Inclusivity.	Ethical and moral challenges; Security threats; Issues of authority and authenticity; Lack of legal guidelines governing AI software.	No empirical studies; No primary data (involving respondents or field studies); Conceptual data analysis rather than practical.	Need for further research into ethical aspects and practical implementation of AI in Islamic education.
7	Integrating AI Into Qur'an Learning: Technical Advances And Pedagogical Gaps. Mehmet Birgun (2026).	Qualitative	Personalized learning, adaptive feedback, and reading error analysis; Accessibility, enhancing motivation and understanding.	Pedagogical guidance and transfer of spiritual meaning; Data accuracy, algorithmic bias, and ethical issues; Quality control and cultural/religious sensitivity.	Pedagogical aspects, student experience, and spiritual guidance are under-researched; Lack of direct user perspective and quantitative effectiveness evaluation.	Empirical studies such as surveys, interviews, or experimental tests.
8	Challenges of Artificial Intelligence (AI) and Its Impact on Quranic Qiraat: A Thematic Review Analysis. Mohamed Fathy et al. (2025).	Qualitative	Identifying reading errors, improving tajwid, and interactive Quran memorization.	Risk of AI generating unauthentic Quranic verses or falsifying textual references (nas); inability to replace blessings (barakah), study etiquette (adab), and ijazah in qiraat.	Data scope concentrated heavily on open online articles.	Shariah review protocols, Islamic AI ethical guidelines, Islamic technology frameworks.
9	AI-Powered Arabic Language Education in the Era of Society 5.0. Rehan & Herdi (2023).	Qualitative	Intelligent Tutoring System (ITS), Voice Assistant, Personalized Learning, Automated Assessment.	Lack of Digital Literacy; teachers' ability to understand and manage tech; lack of quality human resources and unsupportive environments.	Conceptual Understanding Gaps; Curriculum integration.	Talent Development , Professional Training, HumanTechnology Synergy.
10	SWOT Analysis Of AI Integration In Islamic Education. Andri et al. (2025).	Qualitative	Personalization Capabilities and Adaptive Learning; Cognitive Skill Enhancement through	Lack of Emotional Intelligence; Technology Dependence; Data Integrity Issues; Digital	Lack of Empirical Data.	Hybrid Approach exploring blended learning

			Interactive Tools; Support in Teaching Psychomotor Skills; Increased Student Creativity and Engagement; Administrative Management Efficiency.	Divide; Lack of Affective Focus.		Inclusive AccessConducting long-term studies.
11	The Impact of AI-Driven Adaptive Learning Platforms on Islamic Studies Academic Performance (2025).	Qualitative	Provides high personalization by adjusting materials to individual learning paces. Boosts student engagement and motivation through real-time, interactive feedback (e.g., automated Tajweed/voice recognition).	Contextual Misinterpretation: AI struggles with the deep nuance of classical Arabic texts and complex jurisprudential text analysis..	Long-Term Impact & Affective Domain where Existing literature heavily focuses on short-term cognitive scores	Train future LLMs and adaptive platforms
12	Integrating Artificial Intelligence into Arabic Language Education: Socio-Technical Perspectives from Islamic Institutions in Southeast Asia (2025).	Qualitative	Quick grammar feedback, vocabulary practice, pronunciation support, and early error detection	AI struggles significantly with balāghah (rhetoric), elevated literary language, poetry, and classical Arabic text interpretation.	Previous literature primarily analyzed AI as a generic tech tool, leaving a clear gap in empirical research regarding the socio-technical	balancing technology with value-anchored spiritual scaffolding
13	Opportunities and Challenges of Integrating Artificial Intelligence (AI) into Religious Education Systems: A Descriptive Study on Madrasa Education in Sri Lanka	Qualitative	Boosts cognitive and affective engagement through smart tutoring systems, automated evaluation, and educational AI chatbots	Algorithmic Bias where Potential for data models to output culturally insensitive or misaligned theological viewpoints.	Most contemporary literature centers heavily on generic 21st-century software execution	Develop localized AI and educational software that embed strict ethical content
14	Integration of AI Chatbots in Islamic Religious Education: Potential and Challenges from a Doctoral Student Perspective (2025).	Quantitative	Significantly improves time management and workflow efficiency for advanced students. Strong adoption and high reliance on platforms like ChatGPT, ChatPDF, and Jenni AI.	Chatbots lack human nuance, leading to misinformation and systemic information bias Reduces critical independent thought and traditional peer-to-peer social learning dynamics.	Lack of Advanced Learner & Faith Context Research	Implement robust validation and review workflows.
15	Enhancing Arabic Language Proficiency Through Interactive Digital	Quantitative	Provides real-time automated grammar correction and structural feedback for complex Arabic syntax.	Students focus heavily on automated correctness rather than achieving communicative	Lack of Specialized Long-Term Quasi-Experimental Data	Targeted Curricular Blending

	Learning Platforms: A Quasi-Experimental Study in Higher Education (2026).		Quasi-experimental metrics demonstrate higher language retention scores compared to conventional translation methods			
16	Predicting University Student Retention using Artificial Intelligence (2022)	Quantitative	Academic Performance: Average grades (ranging from 75% to 98% in the dataset) act as a strong positive indicator for retention.	The paper evaluated 20 different supervised machine learning algorithms alongside deep learning, requiring extensive hyper-parameter tuning to find an optimal fit.	Enhancement Room in Predictive Capacity.	Predictive institutional models must structurally account for familial background metrics
17	Ai-Gamification In Qur'anic Learning: Assessing Indonesian Islamic Religious Education Teachers' Readiness For Generation Alpha (2025)	Quantitative	Teachers demonstrate a strong foundational comfort with technology, scoring the highest among all measured dimensions (87.2%).	Teachers struggle with how to effectively integrate these tools into actual teaching practices, making it the lowest-performing readiness dimension (78.9%).	Lack of Validated Assessment Tools for Islamic Tech-Readiness	Strengthen Pedagogical Training and Provide Practical Support Systems
18	Ethical Dilemmas and Academic Integrity: Islamic Education Students' Utilization of AI in Homework (2026)	Qualitative	Students utilize AI tools to significantly speed up the completion of their academic assignments. Instant Reference Retrieval: The technology provides easy, rapid access to information	Erosion of Critical Thinking, Erosion of Critical Thinking, Instructional Monitoring Pressures.	Lack of Behavioral Mapping in Islamic Higher Ed	Formulate Institutional Cultivate Ethical Digital Literacy.
19	Generative AI and Academic Integrity in Higher Education: A Systemic Approach to Evaluating the Vulnerabilities of Contemporary Assessment	Qualitative	Generative AI tools serve to boost active student engagement within higher education settings The technology is utilized to significantly enhance efficiency in completing academic workflows.	Dual-Impact Management: Higher education institutions face the complex operational challenge of managing the tool's positive benefits alongside its negative risks simultaneously.	Limitation in Database Diversity and Study Designs	Prioritize institutional initiatives to explicitly improve digital literacy among students and staff
20	Integrating Artificial Intelligence into Islamic Religious Education: Toward a Model for Ethical and Values-Based Technology Adoption in Faith-Based Schools (2025)	Qualitative	Speeds up cross-referencing, multi-language translation, and historical text sorting.	lack genuine personal insight or value alignment	Deficit in Values Anchored Tech Integration, Most contemporary digital pedagogy research investigates pure STEM	Keep Human Educators Centered

FINDINGS

The thematic mapping of the 10 selected articles reveals a distinct pattern in the current academic landscape surrounding AI in Islamic Education. Methodologically, the vast majority of contemporary studies rely heavily on qualitative approaches and conceptual analysis, highlighting a visible scarcity of primary field data or longitudinal experimental research within the chosen literature. The analysis shows that the primary factors encouraging educators to adopt AI focus strongly on personalized learning, adaptive real-time feedback such as Automated Speech Recognition for Quranic recitation and freeing up teachers' time through automated administrative assessment.

Conversely, practical implementation remains strictly bottlenecked by the absence of localized official ministry guidelines, a lack of technical infrastructure particularly in rural areas, and profound anxieties regarding data privacy, algorithmic bias, and ethical integrity. A major recurring theme across the analyzed papers is the inherent tension between advanced technology and traditional Islamic epistemology. Many authors emphasize that current AI engines cannot replicate spiritual blessings (barakah), proper study etiquette (adab), or replace a teacher's critical role as a muaddib (moral educator). This critical gap underscores an urgent, collective call from multiple researchers to move beyond western, secular acceptance models and instead develop an integrated Islamic AI ethical framework anchored firmly in the principles of Maqasid Syariah.

Findings for Research Question One.

Table 5: Analysis Themes for Findings of Research Question One

Journal	AI Content	Impact on Learning
Nurul Thafiqah & Setiyawan (2024), Nilna Azizatus et al. (2024), Khairulnazrin Nasir et al. (2025), Dahliyah Abdul Jalil (2024). Ahmad Maghfurin et al. (2026) Arqawi et al., (2025) Nursani et.al (2025) Kyle & Omar (2025) Andri Nirwana et. (2025) Ridhwa Darmawaty et.al (2026)	Intelligent Tutoring System (ITS), Voice Assistant, Personalized Learning, Automated Assessment.	Reduces teacher workload and accelerates feedback.
Tengku Fatin & Hafizhah (2025), Rehan & Herdi (2023), Mohamed Fathy et al. (2025), Nilna Azizatus et al. (2024), Khairulnazrin Nasir et al. (2025), Tumiran et al. (2025), Nurul Thafiqah & Setiyawan (2024), Andri et al. (2025), Dahliyah Abdul Jalil (2024). Agus Suryana (2025) H.L.M Mohideen (2025) Mohammad Soleh et.al (2025)	Use of chatbots or virtual tutors and motivation through voice recognition technology and digital media.	Increases student motivation and active engagement; Meets individual needs (Differentiated Learning).

The capability of AI to analyze individual student data and provide immediate feedback has become a critical factor driving the use of this technology in education (Tumiran et al. 2025). Particularly in Islamic education, technologies such as real-time pronunciation analysis systems and automated memorization error detection have proven effective in enhancing learning (Khairulnazrin Nasir et al. 2025). Additionally, the use of Voice Assistant Learning and Automatic Assessment significantly helps ease secondary tasks for teachers while conducting classroom instruction. Based on the analysis of various articles, these driving factors can be categorized into several main dimensions: productivity enhancement, personalized learning, interactivity, and the democratization of access to religious knowledge. Table 5 displays the findings and thematic breakdown from the journal analysis.

Intelligent Tutoring System (ITS), Voice Assistant, Personalized Learning, Automated Assessment Content

The primary factor identified in the literature is the increase in efficiency and productivity within the teaching process. The use of AI allows educators to manage administrative and routine tasks faster; according to Tengku

Fatin et al. (2025), this technology can be used to evaluate student readings instantly, providing precise feedback and thereby freeing up time for teachers to focus on student character-building aspects.

This finding is supported by analysis showing that AI can enhance administrative management efficiency in Islamic educational institutions, increasing accessibility, responsiveness, and effectiveness in religious education (Nilna Azizatus Shofiyyah et al. 2024). Furthermore, AI's capability in automated assessment helps reduce teachers' workloads in grading assignments; for instance, the *I-Tasmik* platform in Malaysia features engaging characteristics such as automated Quranic verse reading, voice recording capabilities, and tajwid error detection tools to train tahfiz students (Nurul Thaqifah et al. 2024). Added to this, AI can be used to develop applications that automatically assess memorization and detect errors within it (Tengku Fatin et al. 2025).

Chatbot or Virtual Tutor Usage and Motivation through Voice Recognition Technology Content

Interactivity is a key element in sustaining student motivation, particularly in subjects requiring memorization like the Quran and language subjects like Arabic. The use of voice recognition technology has been identified as a powerful driving factor in memorization (hafazan) and qiraat learning. According to Mohamed Fathy et al. (2025), an AI-based Intelligent Tutor System introduced for tajwid teaching focusing on *tafkhim* (velarization) and *tarqiq* (attenuation) yielded significant improvements in pronunciation accuracy compared to traditional methods.

In addition, students can interact with virtual tutors capable of identifying pronunciation errors and offering direct corrections. Furthermore, the use of Real-time Pronunciation Analysis technology provides immediate feedback regarding mistakes at the sound level (Khairulnazrin Nasir et al. 2025). Findings show that widespread interactivity through AI applications not only facilitates access to learning but also creates an inclusive learning environment for all categories of students. Student motivation was found to increase when they could visually track their progress through data analytics provided by the AI system, creating a sense of achievement in the pursuit of knowledge.

Findings for Research Question Two

Table 6: Analysis Themes for Findings of Research Question Two

No	Author	Frequency Level	Driving Factors / Determinants of Frequency of Use
1	Dahliyah Abdul Jalil (2024)	High / Active	Teacher motivation and acceptance are very high (100% positive inclination) to integrate AI in the classroom.
2	Khairulnazrin Nasir et al. (2025)	High / Active	High demand for mobile apps for self-directed learning and automated linguistic checking.
3	Nilna Azizatus et al. (2024)	High / Active	Pressure from digital transformation waves to replace or complement classical/traditional methods in Islamic education.
4	Rehan & Herdi (2023)	High / Active	Adaptation needs for the Society 5.0 era forcing regular use of AI-based linguistic systems in Arabic training.
5	Nurul Thafiqah & Setiyawan (2024)	Low / Limited	Study is still at the early conceptual/theoretical model building stage (Naqli & Aqli), so regular practical implementation has not occurred.
6	Tengku Fatin & Hafizhah (2025)	Low / Limited	Absence of official guidelines from the ministry/institution and limited digital literacy levels among primary school teachers.

7	Tumiran et al. (2025)	Low / Limited	Unbalanced usage; frequency is concentrated in higher education institutions, whereas at the school level it remains generally low.
8	Mehmet Birgun (2026)	Low / Limited	Existence of pedagogical gaps where teachers and students are not yet skilled at aligning advanced AI tech with actual instructional designs.
9	Mohamed Fathy et al. (2025)	Low / Limited	Sensitivity issues in Quranic Qiraat requiring exact pronunciation (<i>talaqqi mushafahah</i>), causing AI to be less applied to protect reading authenticity.
10	Andri et al. (2025)	Low / Limited	Organizational structural constraints such as lack of funding, lack of teacher training, and anxieties regarding technological ethical issues.
11	Ridhwa Darmawaty et.al (2026)	High / Active	Algorithmic personalization, targeted pacing, data-driven course pathing, and immediate feedback loops on foundational subjects.
12	Agus Suryana (2025)	High / Active	Micro-scaffolding needs grammar tracking, vocabulary checks, pronunciation feedback balanced against socio-technical barriers which infrastructure and teacher monitoring constraints.
13	H.L.M Mohideen (2025)	Low / Limited	Multilingual assistance needs, administrative resource tracking, digital study tools, and localized text assistance versus financial limitations and low digital literacy.
14	Mohammad Soleh et.al (2025)	High / Active	Academic research productivity pressures, information synthesis, literature summarization, and reference localization.
15	Ahmad Maghfurin et al. (2026)	High / Active	Communicative immersion desires, anxiety-reduction during verbal outputs (muhawarah simulation), and interactive vocabulary drills.
16	Arqawi et al., (2025)	Low / Limited	Processing socio-demographic datasets parental income, house space, regional locationa nd analyzing pre-enrollment history to flags at-risk students.
17	Nursani et.al (2025)	High / Active	Extremely high user perception of usefulness (82.0%), high technical literacy comfort (87.2%), and student engagement demands.
18	Eka pariyanti et. al (2024)	High / Active	Desire for rapid task acceleration, shortcutting lengthy research, and gaining instant references for out-of-class assignments.
19	Al-Fadhli, S., & Al-Sharhan, A (2025)	High / Active	Broad workflow enhancement, assignment formatting execution, and basic brainstorming efficiency gains.
20	Kyle & Omar (2025)	Low / Limited	Multi-lingual translation speed and theological conceptual summaries balanced by concerns over content bias or a loss of spiritual connection.

High Frequency Cluster

For the high/active frequency cluster, AI utilization is detected as highly dominant when the study involves mobile applications for self-directed learning, language instruction, or institutions with high teacher motivation. The primary factors driving this high frequency are the ease of personal technology access and global transformation demands, such as the Society 5.0 era, which dictates a shift from classical to digital teaching methods. This situation proves that if an AI platform is user-friendly and flexible, its frequency of application among educators and students will increase drastically.

Low / Limited Frequency Cluster

Conversely, for the low/limited frequency cluster, the majority of articles indicate that AI applications are still rare or have not been optimally used in the classroom. The main factors restricting frequency of use are infrastructure constraints in rural areas, the absence of official guidelines, and pedagogical gaps among teachers who remain at a loss as to how to align AI technology with instructional designs.

Moreover, domain factors of sensitive subjects, such as the Quran and Qiraat, which prioritize traditional methods like learning directly from a master or possessing a chain of transmission along with ethical issues, cause educators to adopt a more cautious approach, thereby lowering the frequency of AI use in their PdP. In conclusion, although AI's potential is widely recognized, its frequency of application remains uneven and highly dependent on technical readiness and syllabus suitability.

Findings for Research Question Three

Table 7: Analysis Themes for Findings of Research Question Three

Journal	Theme of Ease of Use	Impact on Usage
Khairulnazrin Nasir et al. (2025), Rehan & Herdi (2023), Dahliyah Abdul Jalil (2024). Agus Suryana (2025) H.L.M Mohideen (2025) Mohammad Soleh et.al (2025)	Flexibility and Adaptability	Mobile-friendly AI apps and automated linguistic systems are very easy to operate without requiring coding expertise. Creates a more interactive, fun learning environment and eases teacher duties.
Tengku Fatin & Hafizhah (2025), Mehmet Birgun (2026), Mohamed Fathy et al. (2025), Andri et al. (2025).	Infrastructure Support and Accessibility	High accessibility and inclusivity allow students to perform self-directed learning optimally; school infrastructure support for teachers increases usage motivation.

Based on the first thematic analysis, the flexibility and adaptive capabilities of AI technology are critical factors determining its level of ease of use in the PdP context. A literature review from Khairulnazrin Nasir et al. (2025), Rehan and Herdi (2023), and Dahliyah Abdul Jalil (2024) reveals that AI applications are evaluated as 'easy to use' when integrated through mobile-friendly platforms. Their intuitive, user-friendly interfaces supported by automated linguistic systems enable smooth operation without requiring complicated coding expertise. Consequently, this operational ease exerts a significantly positive impact on educators' emotions and workloads. AI usage was found capable of generating a more interactive and enjoyable learning environment, and most importantly, easing teachers' daily tasks (such as preparing Islamic Education teaching aids). Teachers' perceptions of technological ease increase dramatically when they feel happy, relaxed, and unburdened by system technical constraints.

The second theme justifying AI's ease of use refers to infrastructure support and external accessibility. Findings from researchers such as Tengku Fatin and Hafizhah (2025), Mehmet Birgun (2026), Mohamed Fathy et al. (2025), and Andri et al. (2025) assert that ease of AI use is closely tied to the extent to which the technology can be accessed inclusively. High accessibility and inclusivity enable students to conduct self-directed learning processes optimally outside of school hours.

In addition, analysis proves that the existence of robust infrastructure support at the school level acts as a primary catalyst. When schools provide stable core digital facilities, it directly boosts teachers' motivation and confidence to apply various AI tools in the classroom. This indicates that the ease of use of a technology depends not only on the brilliance of the application itself but is heavily supported by the existing digital environmental ecosystem.

DISCUSSION

The integration of Artificial Intelligence (AI) in Islamic Education is not merely a technological shift; rather, it reflects a pedagogical evolution trying to balance modern technological needs with the preservation of sacred Islamic knowledge traditions. Overall, the study's findings demonstrate that AI acts as a catalyst for adaptive and self-directed learning, allowing Islamic Education content to be delivered according to individual student tiers or levels. This reflects a shift away from a "one-size-fits-all" approach to a more inclusive model, aligned with the concept of differentiated learning that is increasingly gaining ground in the mainstream education system.

Main Factors and Effectiveness of AI Use in Islamic Education

These findings show that the main factor driving AI use is its capacity to enhance student interactivity and motivation, particularly in the fields of Quranic studies and the Arabic language. The use of technology such as Automated Speech Recognition (ASR) and Intelligent Tutoring Systems (ITS) was found to provide real-time feedback, which is highly required in tajwid and pronunciation correction processes. This occurs because AI can provide a less risky learning environment, where students feel more comfortable making mistakes and correcting them without feeling self-conscious. Moreover, the democratization of access to religious knowledge through chatbots and digital platforms allows the process of seeking knowledge to occur without limitations of time and space.

However, this effectiveness should not be viewed from a technical angle alone. It reflects a need to integrate Naqli and Aqli elements in AI model development so that it functions not just as a data-processing machine, but as a tool that reinforces faith (akidah) understanding and noble values. Current research trends are beginning to shift from merely evaluating technology acceptance to looking at its real impact on academic achievement and the application of Islamic values.

Challenges of Knowledge Authenticity and Religious Authority

Nevertheless, a more critical discussion emerges when touching upon the aspects of knowledge authenticity and religious authority. There is a clear concern in the literature regarding the risk of "hallucination" or the generation of unauthentic information, including the fabrication of textual references for hadith and Quranic verses by large language models. In the Islamic tradition, knowledge must rely on a clear chain of transmission. The absence of mechanisms within AI algorithms to distinguish between mainstream, authoritative views and weak or deviant opinions can threaten epistemological integrity in Islam.

These findings imply that AI cannot be allowed to function as a sole religious authority. Identity and faith crises can occur if society begins to follow technology blindly without referring to scholars who possess contextual understanding and wisdom. Therefore, there is an urgent need to develop an Islamic AI ethical framework based on the principles of Maqasid Syariah, especially regarding the preservation of religion (*hifz al-din*) and intellect (*hifz al-'aql*).

AI and the Teacher's Role as a Muaddib

Another critical theme that emerged is the risk of dehumanization in education. Although AI is highly efficient in cognitive and psychomotor aspects, it is identified as having severe weaknesses in the affective domain. Islamic Education is not just information transfer (*ta'lim*), but encompasses the process of character and moral formation (*ta'dib*) as well as spiritual purification (*tazkiyah al-nafs*).

The literature consistently emphasizes that AI is incapable of mimicking the empathy, love, and spiritual guidance that can only be provided by a spiritual guide (*guru mursyid*) or *muaddib*. The loss of blessings

(*barakah*) and the etiquette of learning directly from a teacher remains a massive gap in total AI reliance. However, this does not mean AI should be rejected; instead, the teacher's position must remain central to the learning process, while AI serves as an aid or assistant managing routine and technical tasks. This challenge demands Islamic Education teachers to upgrade their digital literacy, not only to operate tools, but to become critical evaluators of content generated by such technology.

Implications of The Study And Research Gaps

The implication of this study is the need for a policy shift in the Islamic education system, particularly in Malaysia, to integrate AI ethics into the teacher education curriculum. There is a need for collaboration between technology experts and Islamic scholars (*ulama*) to ensure that the algorithms developed are shariah-compliant. The identified research gaps include:

1. Lack of Long-Term Empirical Studies: Most current studies remain conceptual or consist of preliminary surveys. There is a requirement for experimental research to evaluate the actual impact of AI on student character formation over an extended period.
2. Lack of Primary Data in Local Contexts: Many discussions still rely on Western literature, whereas the cultural context and religious sensitivities in Southeast Asia require a more specific approach.
3. Student Data Privacy and Integrity Issues: There is still a lack of deep research regarding how students' personal data in religious schools is protected within the AI ecosystem.

CONCLUSION AND RECOMMENDATIONS

On the whole, the integration of AI into Islamic Education offers vast potential to empower teaching quality, but it must be accompanied by high vigilance against epistemological and moral risks. Future research should focus on developing models where AI serves as an assistant to teachers, creating tech-savvy educators who simultaneously hold fast to traditional Islamic values. Additionally, the development of AI applications specifically for Islamic Education must be based on input from religious experts to ensure every generated output meets the standards of knowledge authenticity and preserves the sanctity of Islamic teachings. Lastly, a balance between technological advancement and spiritual integrity is the key to ensuring that AI becomes a blessing (*rahmat*), rather than a tribulation (*fitnah*), in the world of Islamic education.

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