



SMART ENGLISH LEARNING: LEVERAGING ARTIFICIAL INTELLIGENCE TO ENHANCE ENGLISH LANGUAGE INSTRUCTION IN *MADRASAH IBTIDAIYAH*

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Abstrak

Penelitian ini bertujuan menjawab pertanyaan utama mengenai bagaimana kecerdasan buatan (AI) dimanfaatkan dalam pembelajaran Bahasa Inggris di madrasah ibtidaiyah serta sejauh mana efektivitas, tantangan, dan peluang yang muncul dari penerapannya. Penelitian ini diposisikan sebagai studi tinjauan pustaka sistematis yang memetakan penggunaan AI pada konteks pendidikan dasar Islam, mengingat minimnya studi empiris pada level ini. Melalui metode Systematic Literature Review terhadap artikel terindeks nasional dan internasional terbitan 2021–2025, penelitian ini menganalisis bentuk penggunaan AI, hasil pembelajaran yang dilaporkan, dan faktor kontekstual yang memengaruhinya. Hasil kajian menunjukkan bahwa chatbot, intelligent tutoring systems, speech-recognition, dan adaptive learning merupakan teknologi yang paling banyak dimanfaatkan dan terbukti meningkatkan kosakata, membaca, menulis, serta pelafalan ketika terintegrasi dengan desain pedagogis yang tepat. Namun, implementasi di madrasah ibtidaiyah menghadapi kendala signifikan, seperti keterbatasan infrastruktur, kesiapan guru, literasi digital yang beragam, serta kebutuhan penyesuaian nilai budaya dan keagamaan. Studi ini menegaskan bahwa AI memiliki potensi besar untuk memperkuat pembelajaran Bahasa Inggris di MI, namun diperlukan pelatihan guru, pengembangan materi berbasis AI yang kontekstual, serta riset lanjutan bersifat longitudinal.

Kata kunci: Artificial Intelligence, Madrasah Ibtidaiyah, Pembelajaran Bahasa Inggris, Sekolah Dasar.

Abstract

This study investigates how artificial intelligence (AI) is utilized in English language instruction at the *madrasah ibtidaiyah* level and evaluates its effectiveness, challenges, and emerging opportunities. Framed as a systematic literature review, it examines AI integration within Islamic primary education, addressing the scarcity of empirical studies at this level. Drawing on nationally and internationally indexed publications from 2021–2025, the review analyzes types of AI applications, reported learning outcomes, and contextual factors influencing their use. Findings show that chatbots, intelligent tutoring systems, speech-recognition tools, and adaptive learning platforms are the most widely implemented technologies and have demonstrated improvements in vocabulary, reading, writing, and pronunciation when supported by appropriate pedagogical design. Nevertheless, AI implementation in *madrasah ibtidaiyah* is hindered by infrastructural constraints, teacher preparedness, uneven digital literacy, and the need for alignment with cultural and religious values. The study concludes that while AI offers significant potential to enhance English learning in MI, its success depends on targeted teacher training, the development of context-sensitive AI materials, and additional longitudinal research.

Key words: Artificial Intelligence, English Language Learning, *Madrasah Ibtidaiyah*, Primary School.

INTRODUCTION

Since the rapid advancement of digital technology in the past decade artificial intelligence (AI) has increasingly integrated into various aspects of life, including

education. In the field of language instruction, AI offers significant potential as a learning support tool, particularly in enhancing the efficiency and personalization of the learning process (Rahmanto & Indah, 2023). The rapid advancement of artificial intelligence (AI) is reshaping educational practice worldwide, offering adaptive, data-driven tools that can personalize instruction, provide immediate feedback, and expand opportunities for autonomous practice capabilities particularly relevant to language learning.

At the initial stage, researchers began to investigate how artificial intelligence (AI) could be utilized to support the development of specific language skills. For example, in the area of English reading proficiency, AI-based reading exercises have been shown to enhance learners' retention of vocabulary and sentence structures (Nurlaeni & Sya, 2025). Meanwhile, other studies indicate that AI can also contribute significantly to the improvement of students' English writing skills, with many learners reporting that AI-assisted tools help them refine sentence construction, improve grammatical accuracy, and produce more coherent written texts (Nurazizah, 2025).

There thus emerges a growing awareness that artificial intelligence is no longer merely an auxiliary tool, but has become a critical component in the innovation of English-language teaching methods. Recent systematic review studies demonstrate that, when applied with appropriate pedagogical procedures, AI can exert a substantial influence on students' learning motivation as well as the overall effectiveness of English language instruction (Nursyahida, Ramadhanti, Aulia, Puteri, & Tarihoran, 2024; Rahmanto & Indah, 2023). These findings further indicate that AI-supported learning environments promote greater individual engagement, allow more adaptive instructional support, and contribute to measurable improvements in language proficiency development at various educational levels.

Most existing studies have focused on secondary or higher education or on general English language learning, while only a small number have specifically investigated the use of AI in English instruction at the primary level or within *madrasah ibtidaiyah*. For example, although there are literature-based studies on the use of AI to enhance elementary students' speaking skills in English subjects, these studies reveal the limited number of existing investigations and highlight the need for more research focused on the primary-school context (Hartati & Utami, 2025). This gap indicates a lack of both empirical and conceptual evidence regarding how AI can be optimized for English language learning in *madrasah ibtidaiyah*, which represent Islamic-based primary education institutions in Indonesia.

Over the past decade, the rapid advancement of digital technologies has enabled artificial intelligence (AI) to penetrate various dimensions of human activity, including the field of education. Within the domain of language instruction, AI presents considerable potential as an assistive tool that can enhance the learning process, particularly by improving instructional efficiency and enabling more personalized learning experiences (Al Halim, 2023).

This study considers it necessary to conduct a literature-focused review on the contribution of artificial intelligence (AI) to English language learning in *madrasah ibtidaiyah*, given the limited number of primary studies in this context. Through a literature review approach, the study maps existing forms of AI use in primary education and madrasah settings, reported outcomes, and emerging challenges and opportunities. It also examines the effectiveness of AI across key language skills, reading, writing, speaking, and vocabulary while taking into account contextual factors such as curriculum, learning culture, digital literacy of teachers and students, and technological infrastructure. Accordingly, this study aims to analyze how AI has been utilized in English language instruction at the *madrasah ibtidaiyah* level and to identify its effectiveness, challenges, and potential in enhancing students' language skills.

METHODS

This study employs a systematic literature review (SLR) to comprehensively examine the use of artificial intelligence (AI) in English language instruction at the *madrasah ibtidaiyah* level (Agus et al., 2023). The review followed a structured procedure involving the identification, selection, evaluation, and synthesis of relevant scholarly sources published between 2021 and 2025. Data were retrieved from major academic databases such as Google Scholar, ERIC, DOAJ, and Indonesian databases including GARUDA and Moraref, using keywords such as “artificial intelligence,” “English learning,” “primary education,” and “madrasah ibtidaiyah.”

Inclusion criteria consisted of peer-reviewed journal articles, conference papers, and literature-based studies that address AI-assisted English learning in primary or Islamic basic education contexts. Studies unrelated to language learning, non-AI technologies, or secondary/tertiary education settings were excluded. Each selected publication was analyzed using thematic coding to identify patterns regarding types of AI utilization, reported learning outcomes, challenges, and contextual factors influencing implementation. The systematic approach ensures transparency, replicability, and a rigorous synthesis of existing knowledge relevant to AI-enhanced English learning in *madrasah ibtidaiyah*.

RESULT AND DISCUSSION

The researcher obtained data from research articles filtered using specific keywords. For the subsection Artificial Intelligence utilization in english language instruction at the *madrasah ibtidaiyah*, the articles are distributed as follows:

Topic	Year	Amounts
Implementation of AI in Learning at <i>Madrasah Ibtidaiyah</i>	2023	1
	2025	1
AI in English Language Teaching and Learning (ELT/EFL)	2024	1
	2025	2
Teacher/Students' Perceptions, Attitudes, and Preparedness towards AI	2025	2
AI in Science Learning and Elementary School Thematic Learning	2025	1
AI Utilization as a Teaching Aid	2024	1
AI as a General Learning Technology / AI Integration Trends in Elementary Education	2025	1
Total	10 Articles	

Table 1. The Distribution of articles for the first discussion

The table presents the distribution of research articles based on their thematic focus and publication year. The topic Implementation of AI in Learning at *Madrasah Ibtidaiyah* includes two articles published in 2023 and 2025. The topic AI in English Language Teaching and Learning (ELT/EFL) consists of three articles, with one from 2024 and two from 2025. Studies related to Teacher/Students' Perceptions, Attitudes, and Preparedness towards AI contribute two articles, both published in 2025. The topic AI in Science Learning and Elementary School Thematic Learning is represented by one article from 2025. Additionally, AI Utilization as a Teaching Aid includes one article from 2024. Lastly, the category AI as a General Learning Technology / AI Integration Trends in Elementary Education consists of one article published in 2025. In total, the table summarizes 10 reviewed articles.

Next, the researcher also collected articles filtered using specific keywords for the subsection of the effectiveness, challenges, and opportunities of AI implementation in enhancing English language skills among madrasah ibtidaiyah students. The following is the list of articles reviewed:

Topic	Year	Amounts
AI in ELT/EFL and Its Effectiveness	2021	1
	2024	2
	2025	2
AI in Islamic Education and Development of Learning Models	2024	1

Topic	Year	Amounts
Teacher/Students' Perception, Readiness, and Professionalism towards AI	2025	2
AI in Education Policy and Regulatory Challenges	2025	1
AI in Learning Innovation, Differentiation, and Digital Assessment	2024	1
	2025	1
Total	11 Articles	

Table 2. The Distribution of articles for the second discussion

The table outlines the distribution of articles according to their thematic categories and publication years. The topic AI in ELT/EFL and Its Effectiveness is the most represented, with a total of five articles published across 2021, 2024, and 2025. The category AI in Islamic Education and Development of Learning Models includes one article from 2024. Research focusing on Teacher/Students' Perception, Readiness, and Professionalism towards AI contributes two articles, both published in 2025. The theme AI in Education Policy and Regulatory Challenges is represented by one article from 2025. Lastly, the category AI in Learning Innovation, Differentiation, and Digital Assessment comprises two articles, one published in 2024 and another in 2025. In total, the table summarizes 11 reviewed articles.

1. Artificial Intelligence Utilization in English Language Instruction at the Madrasah Ibtidaiyah

Cindicates that the use of AI in English language instruction at the primary education level generally centers on several categories of technology. First, chatbots and intelligent tutoring systems designed to facilitate conversational practice and repetitive drills. Second, adaptive learning systems that adjust instructional content based on students' proficiency levels. Third, speech-recognition software that supports pronunciation training. Fourth, automated assessment tools that provide feedback on writing accuracy and grammar. Kyaw & Deng (2025) reaffirm that chatbots, intelligent tutoring systems (ITS), and speech-feedback applications constitute the most frequently reported tools, offering high potential for repeated practice, personalized instruction, and real-time feedback.

In terms of learning outcomes, Mardhiah, Hajar, Purwati, Muna, & Ariani (2025) have documented positive effects across specific linguistic skills. AI-supported reading activities have been found to enhance vocabulary retention and understanding of sentence structures; automated grammar checkers and feedback generators contribute to improved accuracy and coherence in writing and speech-recognition applications such as SpeechAce and similar platforms have demonstrated measurable gains in fluency and pronunciation following sustained

practice sessions. However, the effectiveness of these tools is often contingent upon pedagogical design, particularly how AI is integrated with teacher guidance, as well as the duration and consistency of instructional interventions.

Within the specific context of *madrasah ibtidaiyah* (MI), primary empirical evidence remains limited yet is gradually emerging. Recent analyses of PGMI students' perceptions and several case studies involving madrasah settings show that both learners and prospective teachers view AI as beneficial for personalization and autonomous practice (Samiha & Aksara, 2025). Nonetheless, actual implementation in MI remains constrained by infrastructural limitations, budget constraints, the varied digital literacy levels of teachers, and concerns regarding the preservation of religious and cultural values. Studies focusing on PGMI cohorts emphasize that pedagogical readiness must be prioritized in teacher training programs to ensure that AI can be integrated effectively without undermining the cultural and moral foundations of madrasah education (Samsiyah, Suharto, & Ulya, 2025).

Moreover, broader reviews of AI adoption in primary education highlight an upward trend in utilization while simultaneously underscoring persistent challenges: dependence on stable internet access and devices, insufficient teacher training that addresses AI-specific pedagogical strategies (as opposed to general digital literacy), and the need for instructional materials tailored to local educational cultures (Kristiawan, Bashar, & Pradana, 2024). Systematic reviews at the primary-school level suggest that, despite the promising benefits of personalized learning and formative feedback, much of the existing research is based on small-scale experiments or case studies, leaving limited evidence regarding long-term transferability of AI-supported practice to real-world communicative competence (Revenaya, Subali, & Ellianawati, 2025).

Ethical concerns, issues of validity, and potential misuse also feature prominently in discussions across countries. Scholars highlight risks such as over-reliance on AI tools for shortcuts (e.g., cheating), biased outputs due to training-data limitations, and the need for institutional guidelines to ensure that AI supports learning rather than substitutes authentic cognitive effort. These concerns hold particular relevance for *madrasah ibtidaiyah*, where the cultivation of moral integrity and academic honesty constitutes a core component of the educational mission (Khalaf, 2024).

Based on current literature, two key patterns emerge regarding *madrasah ibtidaiyah*. First, AI offers a range of pedagogical tools, such as chatbots, intelligent tutoring systems, speech-recognition software, and adaptive learning platforms that

effectively support repeated practice, rapid feedback, and personalized learning in foundational English instruction (Kerimbayev, Adamova, Shadiev, & Altinay, 2025). Second, empirical evidence specific to AI use in MI remains scarce and fragmented; existing local studies highlight infrastructure limitations, funding constraints, uneven teacher digital literacy, and the need to adapt AI-generated content to madrasah values, making findings from general primary schools difficult to generalize (Abidin, 2023). Consequently, the literature emphasizes the need for more systematic research in MI, including longitudinal studies on skill transfer, evaluations of blended learning models, and the development of culturally responsive AI-based instructional materials (Bariroh & Ashari, 2025).

Overall, based on 10 articles of Artificial intelligence is increasingly used in English instruction at *madrasah ibtidaiyah*, mainly through chatbots, intelligent tutoring systems, adaptive learning tools, and speech-recognition applications that offer personalized practice and real-time feedback. Research shows that these tools can improve vocabulary, writing accuracy, fluency, and pronunciation when integrated effectively with teacher guidance. However, implementation in *madrasah ibtidaiyah* remains limited due to infrastructure challenges, varying levels of teacher digital literacy, and concerns about aligning AI with religious and cultural values.

2. Identifying the Effectiveness, Challenges and Opportunities of AI Implementation in Enhancing English Language Skills Among Madrasah Ibtidaiyah Students

Research on AI-assisted English learning at the primary education level consistently highlights several areas of effectiveness that are also relevant to the *madrasah ibtidaiyah* context. First, AI-powered tools such as automated pronunciation evaluators, vocabulary learning applications, and adaptive reading platforms have been shown to strengthen fundamental language skills, particularly in speaking and vocabulary development (Ahmed, Ghafoor, Liliuara, & Qurrota'Akyuningrum, 2025)., for example, demonstrated that AI speech-recognition applications improved young learners' accuracy, fluency, and confidence when practicing English pronunciation (Mardhiah, Purwati, & Muna, 2024). Likewise, studies on AI-based vocabulary platforms at the primary level reported that features such as spaced repetition, gamification, and instant corrective feedback significantly increased retention and learner engagement (Wang & Xu, 2024). These findings suggest that AI can provide targeted, individualized practice aligned with the developmental needs of early-grade learners.

Within Indonesian Islamic schooling contexts, similar patterns emerge. A study by Bukhori & Sain (2024) showed that AI tools used in Islamic elementary

education enhanced learners' motivation and reduced anxiety by providing low-pressure practice environments, particularly beneficial for shy or low-proficiency students. In another study, Huang, Hew, & Fryer (2021) found that AI chatbots were effective in facilitating simple conversational practice for young learners, who benefited from repetitive, scaffolded dialogue that traditional classrooms often cannot provide due to time constraints. Collectively, these findings indicate that AI implementation opens opportunities for more intensive language exposure, personalized feedback, and autonomous learning elements crucial for strengthening English competencies at the *madrasah ibtidaiyah* level.

Despite these advantages, several challenges limit the optimal adoption of AI in English instruction. Infrastructure limitations are among the most reported barriers. Research in Indonesian primary schools shows that internet instability, limited access to digital devices, and insufficient school-level technological support hinder the integration of AI-based learning tools (Jannah, Aisyah, Saputri, Sajida, & Parwiyanto, 2025). In *madrasah ibtidaiyah*, this issue is even more pronounced due to disparities in funding and technological readiness when compared to public elementary schools. Teacher readiness is another major constraint. Studies indicate that although teachers generally recognize the benefits of AI, many lack the digital literacy and pedagogical understanding needed to incorporate AI meaningfully into lesson plans (Nabi, Vortia, & Shardey, 2025). Teachers often rely on conventional instructional models, and without adequate training, AI tools may be used only superficially diminishing their effectiveness (Choiriyah, Ramadhan, Nugroho, & Muharom, 2025).

Ethical considerations also emerge as a challenge. Pitts, Marcus, & Motamedi (2025) concern regarding the appropriateness of AI-generated content, the accuracy of AI feedback for early learners, and the need for adult supervision when students use open-access AI systems. In Islamic educational settings, concerns about alignment with religious values and the need for culturally appropriate content also arise. These challenges highlight the need for more localized AI tools designed specifically for Indonesian madrasah contexts.

Nevertheless, the opportunities presented by AI remain substantial. AI can support differentiated learning pathways, enabling students with varying proficiency levels to progress at their own pace, an essential feature for heterogeneous *madrasah ibtidaiyah* classrooms. Evidence from Ruslim & Khalid (2024) shows that adaptive AI platforms allow struggling learners to receive differentiated instruction while enabling advanced learners to explore more complex tasks, thus enhancing classroom efficiency. AI also provides opportunities for

multilingual and multicultural enrichment. For instance, AI-based translation and storytelling applications allow young learners to interact with English texts that are paired with culturally familiar narratives, increasing relevance and comprehension (Kiki & Soedarto, 2025). Furthermore, AI can help compensate for teacher workload by automating assessments, generating personalized learning materials, and offering real-time progress monitoring functions particularly useful in classrooms with large student populations.

Overall, based on 11 articles research on AI-assisted English learning at the primary level demonstrates clear effectiveness relevant to *madrasah ibtidaiyah*, particularly in improving pronunciation, vocabulary, confidence, and learner engagement through tools like speech-recognition systems, adaptive reading platforms, and AI chatbots. AI also provides individualized, low-pressure practice that boosts motivation and supports shy or low-proficiency students. However, several obstacles remain, including limited infrastructure, low teacher digital readiness, and ethical concerns related to accuracy, supervision, and cultural appropriateness. Even so, AI offers significant opportunities for differentiated instruction, personalized learning pathways, culturally relevant materials, and reduced teacher workload through automated assessment and real-time monitoring, making it a promising approach to strengthening English language learning in *madrasah ibtidaiyah*.

CONCLUSION

The research indicates that the utilization of artificial intelligence in English language instruction at the *madrasah ibtidaiyah* level is marked by the emergence of diverse AI-driven tools, including chatbots, intelligent tutoring systems, speech-recognition applications, and adaptive learning platforms. These technologies provide structured opportunities for repetitive practice, personalized instruction, and immediate feedback, three components that are essential in foundational English learning for young learners. Although empirical studies directly examining AI in *madrasah ibtidaiyah* remain limited, evidence from related primary-school contexts shows that AI can strengthen vocabulary development, reading comprehension, writing accuracy, and pronunciation when integrated with sound pedagogical design. However, the fragmented nature of existing studies suggests that research on AI for Islamic primary schools is still in its early stages and requires more systematic exploration before broader generalizations can be established.

In evaluating the effectiveness, challenges, and opportunities of AI implementation, the literature highlights that AI offers considerable promise for

enhancing English language skills through adaptive learning pathways, autonomous practice environments, and efficient assessment mechanisms. These opportunities align well with the needs of heterogeneous *madrasah ibtidaiyah* classrooms, where students often display varying proficiency levels and require differentiated support. Nonetheless, challenges such as infrastructural constraints, inconsistent digital readiness among teachers, limited funding, and concerns regarding cultural and religious alignment remain significant barriers to implementation. Ethical considerations, including risks of over-reliance and inappropriate AI-generated content, further reinforce the need for strong pedagogical and institutional safeguards. Therefore, future initiatives should prioritize developing culturally responsive AI tools, improving teacher training, and conducting longitudinal and context-specific research to ensure that AI integration meaningfully supports English language learning in *madrasah ibtidaiyah*.

REFERENCES

- Abidin, M. A. (2023). Implementasi teknologi artificial intelligence (AI) untuk mendukung pembelajaran siswa di Madrasah Ibtidaiyah Kecamatan Krembung Sidoarjo. *Jurnal Madrasah Ibtidaiyah*, 2(1), 88–95.
- Agus, A. I., Nurlim, R., Asnanian, W. O. S., Alam, R. I., Padhila, N. I., Ernasari, E., & Ramli, R. (2023). Studi Literatur (Systematic, Narrative, Scoping, Argumentative, Theoretical). *Eureka Media Aksara*.
- Ahmed, I., Ghafoor, A., Liliuara, D., & Qurrota'Akyuningrum, V. (2025). The impact of AI learning tools on ESL learners' motivation and success: A systematic literature review. *English Learning Innovation (Englie)*, 6(1), 134–142.
- Al Halim, M. L. (2023). Pelatihan Integrasi Kecerdasan Buatan Digital dalam Pembelajaran Bahasa Inggris di Madrasah. *Communautaire: Journal of Community Service*, 2(2), 118–125.
- Bariroh, H., & Ashari, A. (2025). Development Model of AI (Artificial Intelligence) - Based Learning Media in Madrasah Ibtidaiyah. *Jurnal Dimensi Pendidikan Dan Pembelajaran*, 13(2), 251–265. <https://doi.org/https://doi.org/10.24269/dpp.v13i2.10868>
- Bukhori, M. I., & Sain, Z. H. (2024). *THE INFLUENCE OF AI ON ISLAMIC EDUCATION : REVOLUTIONIZING LEARNING MODELS*. 1, 336–342.
- Choiriyah, S., Ramadhan, S., Nugroho, A., & Muharom, F. (2025). Artificial intelligence-driven learning assessment in faculties of education: An exploratory study. *Munaddhomah: Jurnal Manajemen Pendidikan Islam*, 6(3), 482–495.
- Hartati, D., & Utami, N. C. M. (2025). STUDI LITERATUR: PENGARUH PENGGUNAAN

ARTIFICIAL INTELLIGENCE TERHADAP SPEAKING SKILL PESERTA DIDIK SD PADA MATA PELAJARAN BAHASA INGGRIS. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(02), 211–223.

- Huang, W., Hew, K., & Fryer, L. (2021). Chatbots for language learning—Are they really useful? A systematic review of chatbot-supported language learning. *Journal of Computer Assisted Learning*, 38, 237–257. <https://doi.org/10.1111/jcal.12610>
- Jannah, T. M., Aisyah, R. N., Saputri, W. E., Sajida, S., & Parwiyanto, H. (2025). The Debate on AI and Coding Integration Issue in Indonesian Education Policy: Urgency, Challenges and Prospect. *Journal of Transformative Governance and Social Justice*, 3(1), 28–40.
- Kerimbayev, N., Adamova, K., Shadiev, R., & Altinay, Z. (2025). Intelligent educational technologies in individual learning: a systematic literature review. *Smart Learning Environments*, 12(1), 1. <https://doi.org/10.1186/s40561-024-00360-3>
- Khalaf, R. (2024). Educators warn AI must be a teaching — not a cheating — aid. Retrieved from ft.com website: <https://www.ft.com/content/26ff910a-d19e-444b-9e4c-f06e6d546db3>
- Kiki, Q., & Soedarto, H. (2025). The Effectiveness of Using Artificial Intelligence in Folk Tale Learning. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 13(2), 3947–3961.
- Kristiawan, D., Bashar, K., & Pradana, D. A. (2024). Artificial intelligence in English language learning: A systematic review of AI tools, applications, and pedagogical outcomes. *The Art of Teaching English as a Foreign Language (TATEFL)*, 5(2), 207–218.
- Kyaw, E. M., & Deng, J. (2025). Systematic Review of Artificial Intelligence Integration in English Language Teaching: Trends, Applications, and Pedagogical Implications. *Educalitra: English Education, Linguistics, and Literature Journal*, 4(2), 153–181.
- Mardhiah, A., Hajar, I., Purwati, D., Muna, H., & Ariani, R. (2025). Leveraging Artificial Intelligence (AI) to Enhance Teachers' Spoken English at an Islamic Boarding School. *Journal of Educational Sciences*, 9(6), 5163–5176.
- Mardhiah, A., Purwati, D., & Muna, H. (2024). Artificial Intelligence (AI) in Enhancing Spoken English Proficiency: A Systematic Literature Review. *International Journal of English Linguistics, Literature, and Education (IJELLE)*, 6(2).
- Nabi, F., Vortia, W., & Shardey, E. (2025). Teacher Readiness for AI and Digital Tools in K- 12 Classrooms: A Review of Professional Development Trends and Gaps. *International Journal For Multidisciplinary Research*, 7, 17.

<https://doi.org/10.36948/ijfmr.2025.v07i05.55119>

- Nurazizah, S. (2025). Penggunaan Artificial Intelligence (AI) dalam Pembelajaran Kemampuan Menulis Bahasa Inggris. *Karimah Tauhid*, 4(7), 4571–4588.
- Nurlaeni, B., & Sya, M. F. (2025). Belajar Bahasa Inggris dengan AI Melalui Latihan Reading untuk Mempermudah Daya Ingat. *Karimah Tauhid*, 4(9), 6958–6979.
- Nursyahida, H. M., Ramadhanti, T., Aulia, N. H. I., Puteri, S. N., & Tarihoran, N. (2024). The Use of AI and Its Effectiveness In ELT: A Systematic Review. *Algebra: Jurnal Pendidikan, Sosial Dan Sains*, 4(2), 10–18.
- Pitts, G., Marcus, V., & Motamedi, S. (2025). *Student Perspectives on the Benefits and Risks of AI in Education*. <https://doi.org/10.48550/arXiv.2505.02198>
- Rahmanto, A., & Indah, R. N. (2023). Artificial intelligences in English teaching and learning: a systematic research review. *Edu-Ling: Journal of English Education and Linguistics*, 7(1), 167–175.
- Revenaya, M., Subali, B., & Ellianawati, E. (2025). Exploring the Integration of Artificial Intelligence in Primary Education: A Systematic Literature Review (2020–2024). *STEAM Journal For Elementary School Education*, 1(02), 116–136.
- Ruslim, I., & Khalid, F. (2024). The Use of Artificial Intelligence in Differentiated Instruction Classrooms. *International Journal of Academic Research in Business and Social Sciences*, 14. <https://doi.org/10.6007/IJARBS/v14-i8/22435>
- Samiha, Y. T., & Aksara, L. (2025). PGMI Students' Perceptions of the Implementation of Artificial Intelligence (AI) Technology in Learning in Madrasah Ibtidaiyah. *Journal of Educational Sciences*, 1055–1065.
- Samsiyah, N., Suharto, V. T., & Ulya, C. (2025). Artificial Intelligence (AI) in Language and Science Learning in Elementary Schools: Teacher Perceptions and Solutions. *IJIS Edu: Indonesian Journal of Integrated Science Education*, 7(1), 144–155.
- Wang, H., & Xu, T. (2024). The Effectiveness of Artificial Intelligence on English Language Learning Achievement. *System*, 125, 103428. <https://doi.org/10.1016/j.system.2024.103428>