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Artificial Intelligence as Linguistic Scaffolding in Mahārah Kalām Learning: Addressing Lexical and Morphosyntactic Challenges

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Abstract

The rapid development of generative artificial intelligence (AI) has created new opportunities for supporting foreign language learning, including Arabic speaking (*Mahārah Kalām*). However, empirical evidence explaining how students utilize AI to address linguistic challenges during oral language production remains limited. This study explores the use of AI in supporting university students' Arabic speaking learning, focusing on linguistic challenges, AI-assisted learning practices, and perceived changes in learning experiences. A qualitative case study was conducted with ten undergraduate students enrolled in the Arabic Language Education Program at Universitas Islam Negeri Salatiga, Indonesia. Data were collected through semi-structured interviews and participant observation and analyzed using thematic analysis. The findings reveal three dominant forms of AI utilization: supporting vocabulary retrieval, assisting sentence construction based on *nahwu* and *ṣarf*, and facilitating students' preparation before speaking activities. The study also indicates that AI helps students access linguistic support more efficiently and enhances their readiness for classroom speaking practices. Nevertheless, lecturer mediation remains essential to validate AI-generated outputs and prevent excessive reliance on technology. These findings suggest that AI should be integrated as a pedagogical support tool rather than a substitute for language instruction in Arabic speaking classrooms.

Keywords: *Artificial Intelligence; Arabic Language Learning; Mahārah Kalām; Linguistic Support; Qualitative Case Study*

Abstrak

Perkembangan pesat *generative artificial intelligence* (AI) membuka peluang baru dalam mendukung pembelajaran bahasa asing, termasuk keterampilan berbicara bahasa Arab (*Mahārah Kalām*). Namun, bukti empiris mengenai bagaimana mahasiswa memanfaatkan AI untuk mengatasi hambatan linguistik selama proses produksi bahasa lisan masih relatif terbatas. Penelitian ini bertujuan mengeksplorasi pemanfaatan AI dalam pembelajaran *Mahārah Kalām*, dengan fokus pada hambatan linguistik, bentuk pemanfaatan AI, serta perubahan pengalaman belajar mahasiswa. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus yang melibatkan sepuluh mahasiswa Program Studi Pendidikan Bahasa Arab Universitas Islam Negeri Salatiga. Data dikumpulkan melalui wawancara semi-terstruktur dan observasi partisipatif, kemudian dianalisis menggunakan *thematic analysis*. Hasil penelitian menunjukkan tiga bentuk utama pemanfaatan AI, yaitu membantu pencarian kosakata, mendukung penyusunan struktur kalimat berdasarkan kaidah *nahwu* dan *ṣarf*, serta mempersiapkan mahasiswa sebelum praktik berbicara. Temuan penelitian juga mengindikasikan bahwa AI mempermudah akses terhadap dukungan linguistik dan membantu meningkatkan kesiapan mahasiswa dalam praktik berbicara di kelas. Meskipun demikian, peran dosen tetap penting untuk memvalidasi keluaran AI dan mencegah ketergantungan terhadap teknologi. Oleh karena itu, AI perlu diintegrasikan sebagai pendukung pedagogis, bukan sebagai pengganti proses pembelajaran bahasa Arab.

Kata Kunci: Kecerdasan Buatan; Pembelajaran Bahasa Arab; *Mahārah Kalām*; Dukungan Linguistik; Studi Kasus Kualitatif

Introduction

The rapid advancement of Artificial Intelligence (AI), particularly Generative Artificial Intelligence (GenAI), has fundamentally transformed the landscape of language learning. While digital technologies previously served primarily as content delivery tools, AI has evolved into an intelligent learning partner capable of generating contextual responses, providing immediate feedback, adapting learning tasks to learners' proficiency levels, and facilitating language interactions that closely resemble authentic communication.¹ This transformation has shifted language learning from a teacher-centered approach toward more adaptive, personalized, and collaborative

¹ Divekar, Rahul R., Jaimie Drozdal, Yalun Zhou, Hui Su, Yue Chen, Houming Zhu, James A. Hendler, and Jonas Braasch. "Foreign Language Acquisition via Artificial Intelligence and Extended Reality: Design and Evaluation." *Computer Assisted Language Learning* 35, no. 9 (December 2022): 2332–60. <https://doi.org/10.1080/09588221.2021.1879162>.

learning environments in which learners actively interact with AI systems. Consequently, AI is no longer viewed merely as an educational technology but as a pedagogical agent capable of extending learning opportunities beyond the classroom while fostering greater learner autonomy.²

These developments have also influenced the teaching and learning of foreign languages, including Arabic, whose linguistic characteristics differ considerably from those of most languages prioritized in AI development. Arabic's root-pattern morphology, relatively flexible syntactic structure, inflectional system (*i' rāb*), and the close relationship between word formation and grammatical function make it one of the most linguistically complex languages for language production.³ These complexities become particularly evident in *Mahārah Kalām* (Arabic speaking), where students are expected not only to understand linguistic rules but also to retrieve appropriate vocabulary, construct grammatically accurate sentences, and communicate ideas spontaneously in authentic communicative contexts.⁴

Previous studies have consistently identified Arabic speaking as one of the most challenging language skills for learners to master. These challenges stem not only from limited speaking practice but also from linguistic difficulties encountered during language production.⁵ Among the most common challenges are limited vocabulary knowledge and difficulties in constructing sentences according to the principles of *nahwu* (Arabic syntax) and *ṣarf* (Arabic morphology). Such constraints often slow learners' speech production, increase hesitation during communication, and shift their attention toward grammatical accuracy

² Wang, Yiyin, Tiancheng Zhang, Le Yao, and Paul Seedhouse. "A Scoping Review of Empirical Studies on Generative Artificial Intelligence in Language Education." *Innovation in Language Learning and Teaching*, June 5, 2025, 1–28. <https://doi.org/10.1080/17501229.2025.2509759>.

³ Shahbari-Kassem, Abeer, Rachel Schiff, and Elinor Saiegh-Haddad. "Development of Morphological Awareness in Arabic: The Role of Morphological System and Morphological Distance." *Reading and Writing* 38, no. 8 (October 2025): 2235–67. <https://doi.org/10.1007/s11145-024-10581-0>.

⁴ Mustaghfirin, Masrun, and Rusdi. "AI-Augmented Game-Based Learning for Enhancing Arabic Speaking Skills: Evidence from a Quasi-Experimental Study." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 7, no. 1 (January 2026): 76–92. <https://doi.org/10.19105/ajpba.v7i1.22619>.

⁵ Albantani, Azkia Muharom, and Ahmad Madkur. "Teaching Arabic in the Era of Industrial Revolution 4.0 in Indonesia: Challenges and Opportunities." *ASEAN Journal of Community Engagement* 3, no. 2 (December 2019). <https://doi.org/10.7454/ajce.v3i2.1063>.

rather than communicative fluency. Consequently, students' participation in speaking activities is frequently reduced by foreign language speaking anxiety and concerns about making linguistic errors.⁶

The emergence of AI platforms such as ChatGPT, Gemini, Google Translate, and other Large Language Model (LLM)-based applications offers new opportunities to address these challenges. Unlike conventional digital dictionaries or machine translation systems, generative AI provides multiple forms of linguistic support simultaneously, including contextual vocabulary suggestions, sentence construction, conversational simulation, grammatical correction, and immediate feedback.⁷ These capabilities have increasingly positioned AI as a language-learning companion that enables students to practice independently without relying exclusively on teacher assistance.

The growing adoption of GenAI has stimulated substantial advances in AI-assisted language learning by introducing forms of instructional support that were previously difficult to achieve through conventional educational technologies. Previous research has demonstrated that AI provides rapid, adaptive, and context-sensitive feedback, thereby enhancing the quality of language learning. Lu and Zeng reported that ChatGPT-generated feedback was comparable to instructor-generated feedback and contributed to improvements in EFL students' writing quality, although learners remained concerned about contextual appropriateness and linguistic naturalness.⁸ Likewise, Hong, Viriyavejakul, and Vate-U-Lan found that integrating generative AI within a scaffolding-based instructional framework enhanced learners' critical thinking, metacognitive reflection, and learning engagement.⁹

⁶ Icha Gilang Permata, Icha Gilang Permata, and Machrup Eko Cahyono. "Implications of Social Anxiety Disorder on the Improvement of Maharah Al-Kalam Arabic Students." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 4, no. 2 (July 2023): 124–47. <https://doi.org/10.19105/ajpba.v4i2.8877>.

⁷ Hong, Hui, Poonsri Vate-U-Lan, and Chantana Viriyavejakul. "Generative AI-Mediated Scaffolds for Enhanced Critical Thinking in EFL Writing." *Edehweiss Applied Science and Technology* 9, no. 6 (June 2025): 43–54. <https://doi.org/10.55214/25768484.v9i6.7751>.

⁸ Lu, Dunming (Jason), and Yutian Zeng. "Exploring the Use of ChatGPT-Generated Model Texts as a Feedback Instrument: EFL Students' Text Quality and Perceptions." *Innovation in Language Learning and Teaching*, July 3, 2025, 1–21. <https://doi.org/10.1080/17501229.2025.2525341>.

⁹ Hong, Hui, Poonsri Vate-U-Lan, and Chantana Viriyavejakul. "Generative AI-Mediated Scaffolds for Enhanced Critical Thinking in EFL Writing." *Edehweiss Applied Science and Technology* 9, no. 6 (June 2025): 43–54. <https://doi.org/10.55214/25768484.v9i6.7751>.

Similarly, Yu demonstrated that AI-supported vocabulary learning integrating contextual and multimodal support significantly improved vocabulary acquisition while highlighting the importance of personalized learning and cognitive load regulation in AI-assisted language learning.¹⁰

At the same time, previous studies have emphasized that the effectiveness of AI depends largely on pedagogical mediation and the nature of language-learning tasks. Abdelhalim, Alsahil, and Alsuhaibani found that university students preferred ChatGPT-generated translations over Google Translate because they better captured linguistic and cultural nuances, although human verification remained essential to ensure translation accuracy.¹¹ Similarly, Elzerman argued that uncontrolled AI use may lead to cognitive offloading, surface learning, and excessive dependence on AI, suggesting that AI should be designed to augment rather than replace learners' cognitive processes.¹² Despite demonstrating AI's considerable potential in language education, existing studies have primarily focused on writing, translation, vocabulary acquisition, and critical thinking. Comparatively little attention has been paid to how students employ AI to overcome linguistic challenges during oral language production, particularly in *Mahārah Kalām*. Accordingly, this study focuses on students' experiences in using AI to address vocabulary limitations, sentence-construction difficulties, and speaking preparedness in Arabic language learning, thereby contributing to a deeper understanding of AI-supported language production in higher education.

Against this background, the present study aims to explore how university students utilize Artificial Intelligence (AI) when encountering linguistic challenges in *Mahārah Kalām*. Specifically, it investigates

¹⁰ Yu, Miao. "Optimizing EFL Vocabulary Acquisition: A Randomized Controlled Mixed-Methods Investigation of Artificial Intelligence-Driven Incidental, Contextual, and Multimodal Strategies." *Education and Information Technologies* 31, no. 1 (January 2026): 53–97. <https://doi.org/10.1007/s10639-025-13803-2>.

¹¹ Abdelhalim, Safaa M., Asma A. Alsahil, and Zainab A. Alsuhaibani. "Artificial Intelligence Tools and Literary Translation: A Comparative Investigation of ChatGPT and Google Translate from Novice and Advanced EFL Student Translators' Perspectives." *Cogent Arts & Humanities* 12, no. 1 (December 2025). <https://doi.org/10.1080/23311983.2025.2508031>.

¹² Elzerman, Garth H. "When AI Does the Thinking: The Risks of Over-Reliance on Artificial Intelligence in Higher Education Language Learning." *2025 5th International Conference on Artificial Intelligence and Education (ICAIE)*, May 14, 2025, 773–78. <https://doi.org/10.1109/ICAIE64856.2025.11158185>.

how AI supports students during oral language production, identifies the types of linguistic challenges addressed through AI, and examines students' perceived changes in learning experiences following AI integration. By addressing these issues, this study seeks not only to expand current knowledge on AI integration in Arabic language learning but also to provide a more comprehensive understanding of how AI functions as a source of linguistic scaffolding that complements, rather than replaces, pedagogical mediation by instructors in higher education Arabic speaking classrooms.

Method

This study employed a qualitative case study design to explore how artificial intelligence (AI) mediates the resolution of linguistic challenges in Arabic *Mahārah Kalām* learning. A qualitative approach was selected because the objective of this research was not to measure the effectiveness of AI quantitatively, but rather to understand the experiences, perceptions, and learning processes through which students utilize AI to overcome linguistic constraints during speaking activities. The case study design enabled an in-depth investigation of AI-assisted learning practices within their authentic educational context, allowing the researchers to capture the complexity of interactions between students, AI technologies, and classroom pedagogy.¹³

The study was conducted in the Arabic Language Education Program at Universitas Islam Negeri (UIN) Salatiga, Indonesia. Participants were selected using purposive sampling to ensure that all informants possessed direct experience relevant to the research objectives. The selection criteria included: (1) undergraduate students currently enrolled in the *Mahārah Kalām* course; (2) regular users of at least one generative AI platform, such as ChatGPT, Gemini, or Google Translate, during Arabic speaking practice; and (3) willingness to participate voluntarily throughout the research process. Based on these criteria, ten fourth-semester students were recruited as research participants. Although the number of participants was relatively limited, qualitative case study research prioritizes information richness rather than statistical representation. The selected participants provided sufficiently diverse experiences to enable an in-depth exploration of AI-assisted language learning practices.

¹³ John W. Creswell, and Cheryl N. Poth. *Qualitative Inquiry and Research Design*. 5th ed. SAGE Publications, Inc, 2023.

Data were collected through semi-structured interviews and participant observation conducted over the course of classroom learning activities. Semi-structured interviews were employed to explore students' perceptions regarding the linguistic challenges they encountered before and after utilizing AI, the strategies they adopted when interacting with AI systems, and their evaluation of AI-generated feedback during speaking practice. Meanwhile, participant observation was conducted to document students' actual learning behaviors, including their interactions with AI applications, classroom participation, collaborative dialogue construction, and responses to teacher feedback. The combination of interviews and classroom observations enabled methodological triangulation, allowing participants' reported experiences to be interpreted alongside naturally occurring classroom practices.

The collected data were analyzed using thematic analysis following the procedures proposed by Braun and Clarke.¹⁴ The analysis began with repeated reading of interview transcripts and observation notes to achieve data familiarization. Subsequently, meaningful segments of data were coded inductively according to recurring patterns related to students' linguistic experiences. Similar codes were then grouped into broader categories representing common themes, which were continuously refined through iterative comparison across participants. Through this analytical process, three overarching themes emerged, namely AI-assisted lexical support, AI-assisted morphosyntactic scaffolding, and AI-assisted affective support in Arabic speaking learning. These themes subsequently served as the analytical framework for interpreting the findings and discussing the pedagogical role of AI in *Mahārah Kalām* learning.

To enhance the trustworthiness of the findings, several strategies were employed throughout the research process. Data triangulation was achieved by integrating evidence obtained from interviews and classroom observations. Member checking was conducted by inviting several participants to review the researchers' interpretations to ensure that the findings accurately reflected their learning experiences. In addition, peer debriefing among the research team was undertaken to discuss coding decisions and thematic interpretations, thereby reducing

¹⁴ Braun, Virginia, and Victoria Clarke. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3, no. 2 (January 2006): 77–101. <https://doi.org/10.1191/1478088706qp063oa>.

potential researcher bias. Rather than pursuing statistical generalization, this study sought analytical generalization by providing an in-depth explanation of how AI functions as linguistic scaffolding within the specific context of Arabic speaking instruction.

Results and Discussion

Analysis of classroom observations and student interviews revealed that the use of Artificial Intelligence (AI) in *Mahārah Kalām* learning extended beyond its function as a technological learning aid. More importantly, AI was utilized by students to address various linguistic challenges encountered during Arabic speaking activities. The thematic analysis generated three major themes describing students' use of AI in learning: (1) AI as lexical support, (2) AI as morphosyntactic support, and (3) AI as affective support for speaking readiness.

Table 1. Summary of Research Findings

Theme	Students' Challenges	AI Utilization	Indicated Role of AI
Lexical Support	Limited vocabulary knowledge	Searching for new vocabulary, lexical alternatives, and context-appropriate translations	Assisting students in retrieving vocabulary needed for dialogue construction
Morphosyntactic Support	Difficulties in constructing sentences according to <i>nahwu</i> and <i>ṣarf</i> rules	Checking sentence structure, verb conjugation, and grammatical organization	Assisting students in reviewing sentence structures before speaking activities
Affective Support	Hesitation and fear of making linguistic errors	Independent practice using AI and receiving preliminary feedback before presentations	Helping students feel better prepared and more confident during speaking practice

Table 1 indicates that the forms of AI utilization identified in this study correspond to three major challenges experienced by students during *Mahārah Kalām* learning. These challenges encompass not only linguistic difficulties but also students' psychological readiness to

communicate in Arabic. Within this context, AI served as an accessible source of learning support throughout the learning process.

AI Support for Vocabulary Development

Based on classroom observations and interview data, limited vocabulary emerged as the most frequently encountered linguistic challenge during Arabic dialogue construction. Students often struggled to retrieve appropriate vocabulary to express their ideas, causing interruptions while searching for suitable lexical equivalents.

During group discussions, students used AI applications such as ChatGPT, Gemini, and Google Translate to search for unfamiliar vocabulary. AI use extended beyond simple word translation, as students also explored alternative lexical choices that better suited the context of their conversations. These alternatives were subsequently discussed among group members before selecting the vocabulary to be incorporated into their dialogues.

Classroom observations further showed that AI was actively employed during the vocabulary-searching stage of dialogue preparation. Nevertheless, lecturers continued to provide guidance and clarification whenever inappropriate lexical choices were identified. These findings suggest that AI functioned primarily as a source of lexical support, facilitating students' access to appropriate vocabulary while complementing rather than replacing collaborative discussion and instructor guidance.

AI Support for Sentence Construction

In addition to vocabulary limitations, students encountered difficulties in constructing Arabic sentences in accordance with the principles of *nahwu* (syntax) and *ṣarf* (morphology). These challenges became particularly evident when students attempted to transform individual vocabulary items into coherent and grammatically acceptable sentences for oral communication.

Observational data revealed that students used AI to review sentence structures before presenting their dialogues in class. AI assisted them in checking grammatical organization and generating alternative sentence formulations considered more appropriate. However, lecturers continued to verify AI-generated outputs to ensure that students did not accept AI suggestions uncritically.

Throughout the learning process, lecturers continued to identify several recurring grammatical errors, including mismatches between *fi'il* (verb) and *fā'il* (subject), inappropriate use of *ḍamīr* (pronouns), inaccuracies in *i'rāb* (inflection), and errors in verb conjugation (*taṣrīf*).

Consequently, AI was primarily utilized as an initial grammatical checking tool, whereas final validation remained the responsibility of the lecturer.

These findings indicate that AI did not replace the teaching of Arabic grammar in *Mahārah Kalām* instruction. Instead, it functioned as an initial source of linguistic support that helped students identify potential grammatical inaccuracies before receiving instructor feedback.

AI Support for Speaking Readiness

The third theme concerns students' experiences of using AI before participating in classroom speaking activities. Interview findings suggest that students perceived noticeable differences in their learning experiences before and after integrating AI into *Mahārah Kalām* learning.

Prior to using AI, students frequently reported hesitation when speaking Arabic because they were concerned about making errors in vocabulary selection and sentence construction. After incorporating AI into their learning process, they were able to review their dialogues and obtain preliminary feedback before presenting them in class. This opportunity allowed students to feel better prepared for classroom presentations and speaking practice.

Classroom observations likewise demonstrated that AI was primarily employed during the preparation stage, whereas actual speaking activities continued to be conducted under direct lecturer supervision. Accordingly, AI did not replace oral communication activities but instead served as a preparatory learning tool prior to classroom speaking practice.

Overall, the three themes demonstrate that AI utilization in *Mahārah Kalām* learning was centered on supporting students throughout the learning process, particularly when they encountered vocabulary limitations, sentence-construction difficulties, and hesitation before speaking activities. Although AI provided valuable learning support, classroom observations consistently indicated that lecturer involvement remained essential to ensure the accuracy of Arabic language use and to prevent excessive dependence on AI-generated outputs.

Discussion

The findings of this study indicate that the use of Artificial Intelligence (AI) in *Mahārah Kalām* learning extends beyond its role as a digital information source. Instead, AI serves as a form of linguistic support that assists students in overcoming challenges encountered during Arabic oral production. The findings reveal three primary forms of AI-assisted support: facilitating vocabulary retrieval, assisting students in reviewing sentence structures, and enhancing their preparedness before classroom speaking activities. These results suggest that AI is primarily utilized during the language production stage, where learners transform their linguistic knowledge into meaningful spoken communication.

These findings are consistent with Yuan's study, which argues that generative AI is increasingly adopted as a language-learning companion because of its ability to provide immediate feedback, generate contextually appropriate language alternatives, and support autonomous learning beyond the classroom.¹⁵ However, the present study offers a different perspective. Whereas previous research has largely emphasized AI's effectiveness in improving learning outcomes or learner motivation, this study demonstrates that students primarily employ AI when encountering linguistic difficulties during dialogue construction. In this respect, AI is perceived not merely as an instructional technology but as a practical source of linguistic assistance that supports students in selecting appropriate vocabulary and constructing Arabic sentences.¹⁶

One of the most prominent findings concerns the extensive use of AI to address vocabulary limitations. In *Mahārah Kalām*, adequate vocabulary knowledge is a prerequisite for effective oral communication.¹⁷ When students are unable to retrieve the vocabulary

¹⁵ Zhuang, Yipeng, Ruibin Zhao, ZhiWei Xie, and Philip L. H. Yu. "Enhancing Language Learning through Generative AI Feedback on Picture-Cued Writing Tasks." *Computers and Education: Artificial Intelligence* 9 (December 2025): 100450. <https://doi.org/10.1016/j.caeai.2025.100450>.

¹⁶ Abdullahi, Tassallah, Ritambhara Singh, and Carsten Eickhoff. "Learning to Make Rare and Complex Diagnoses With Generative AI Assistance: Qualitative Study of Popular Large Language Models." *JMIR Medical Education* 10 (February 2024): e51391. <https://doi.org/10.2196/51391>.

¹⁷ Ilmiani, Aulia Mustika, Nurul Wahdah, and Mahfuz Rizqi Mubarak. "The Application of Albert Bandura's Social Cognitive Theory: A Process in Learning Speaking Skill." *Ta'lim al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab & Kebahasaaraban* 5, no. 2 (December 2021). <https://doi.org/10.15575/jpba.v5i2.12945>.

required to express their ideas, communication tends to be interrupted while they search for appropriate lexical equivalents.¹⁸ Under these circumstances, AI functions as an immediately accessible lexical resource that enables students to continue their learning activities without prolonged interruptions. Nevertheless, the findings do not indicate that AI directly improves students' vocabulary mastery. Rather, they suggest that AI facilitates faster access to the vocabulary required during the learning process.¹⁹

Beyond lexical support, the findings also demonstrate that students use AI to review sentence structures before participating in speaking activities. Applying the principles of *nahwu* (Arabic syntax) and *ṣarf* (Arabic morphology) remains one of the most challenging aspects of Arabic language learning, particularly when students attempt to transform isolated vocabulary into complete and grammatically acceptable sentences.²⁰ In this context, AI is primarily employed to generate alternative sentence formulations and conduct preliminary grammatical checking. However, students do not rely entirely on AI-generated outputs. Final validation continues to be provided through lecturer guidance and corrective feedback.²¹ Consequently, AI functions as a source of preliminary linguistic support rather than as an authority determining grammatical correctness.

These findings can be interpreted through the perspective of Interlanguage Theory, which proposes that second-language learners

¹⁸ Mahmudah, Menik, Nurhanifansyah Nurhanifansyah, and Syarif Muhammad Syaheed bin Khalid. "Psycholinguistic Approaches to Enhancing Arabic Speaking Proficiency through Comic Strips." *Arabiyatuna: Jurnal Bahasa Arab* 8, no. 2 (November 2024): 805–26. <https://doi.org/10.29240/jba.v8i2.11349>.

¹⁹ Haris, Abdul, MD. Qutbuddin, and Ahmad Fatoni. "Teachers' Trends in Teaching Arabic in Elementary Schools." *Izdihar: Journal of Arabic Language Teaching, Linguistics, and Literature* 4, no. 2 (August 2021): 195–210. <https://doi.org/10.22219/jiz.v4i2.16875>.

²⁰ Muhlis, Wachida, Muassomah Muassomah, Ibnu Hajar, Hasmiati Hasmiati, Rusdiana Rusdiana, Andi Muammar Kareba, and Nurfadillah Nurfadillah. "Enhancing Nahwu Mastery: Implementation of the Card Sort Method in Madrasah Aliyah." *Alsinatuna* 9, no. 2 (August 2024): 207–21. <https://doi.org/10.28918/alsinatuna.v9i2.2268>.

²¹ Farid, Edi Kurniawan, and Aisyatur Rodhiyah. "The Strategy of Teaching Arabic Composition in The Arabic Language Development Center at Pondok Pesantren Darul Lughah Wal Karomah Kraksaan Probolinggo Indonesia | Istirotiyyah Ta'lim al-Insyah Fiy Markaz Tabahhur al-Lughah al-'Arabiyah Bi Ma'had Darul L." *Mantiqutayr: Journal of Arabic Language* 2, no. 2 (July 2022): 132–45. <https://doi.org/10.25217/mantiqutayr.v2i2.2370>.

gradually develop an evolving linguistic system throughout the learning process.²² At this developmental stage, inaccuracies in vocabulary selection and sentence construction represent a natural component of language acquisition. The findings suggest that students tend to utilize AI when they encounter limitations within this evolving linguistic system. Although this study does not directly measure interlanguage development, the findings indicate that AI provides opportunities for students to obtain preliminary feedback before receiving formal correction from their lecturers. Accordingly, AI may be understood as a learning support that encourages students to reflect on their own language production rather than replacing the language learning process itself.

The findings also reveal changes in students' learning experiences following the integration of AI into *Mahārah Kalām* instruction. Students reported feeling better prepared for classroom speaking activities because they were able to review their dialogues and receive preliminary feedback before presenting them. This suggests that AI contributes not only to linguistic preparation but also to students' readiness to participate in classroom learning.²³ Since this study did not quantitatively measure speaking anxiety, these findings should be interpreted as changes in students' perceived readiness rather than as evidence that AI directly enhances speaking confidence.

Another important finding concerns the continued central role of lecturers throughout the learning process.²⁴ Classroom observations showed that AI was primarily employed during vocabulary retrieval, dialogue preparation, and preliminary grammatical checking, whereas clarification, correction, and final evaluation remained the responsibility of the lecturer. These findings suggest that integrating AI into *Mahārah Kalām* does not diminish the pedagogical role of instructors but instead expands the range of learning resources available to students. This

²² Ogiermann, Eva, and Spyridoula Bella. "An Interlanguage Study of Request Perspective: Evidence from German, Greek, Polish and Russian Learners of English." *Contrastive Pragmatics* 1, no. 2 (September 2020): 180–209. <https://doi.org/10.1163/26660393-BJA10003>.

²³ Salmanova, Shehla. "Gamification and AI in Language Learning – A New Era of Digital Education." *Acta Globalis Humanitatis et Linguarum* 2, no. 1 (February 2025): 262–69. <https://doi.org/10.69760/aghel.02500134>.

²⁴ Rahman, Rifqi Aulia, and Indah Kumalasari. "The Dynamics of Arabic Language Curriculum at Arabic Education Department of UIN Sunan Kalijaga Yogyakarta." *LISANIA: Journal of Arabic Education and Literature* 4, no. 2 (December 2020): 140–62. <https://doi.org/10.18326/lisania.v4i2.140-162>.

observation supports Holmes' argument that the educational value of AI depends not only on technological sophistication but also on how effectively it is embedded within pedagogically meaningful instructional practices.²⁵ In this context, lecturers continue to function as facilitators, feedback providers, and guardians of linguistic accuracy-roles that cannot be fully replaced by AI systems.

Overall, this study contributes to the growing body of research on AI-assisted Arabic language learning by demonstrating that AI is primarily utilized as a source of linguistic support during oral language production rather than as a substitute for instruction. While previous studies have largely focused on AI's effectiveness in improving learning outcomes and learner motivation, the present findings provide a more nuanced understanding of how AI supports students in addressing linguistic challenges encountered during *Mahārah Kalām*. Although the study is limited to a specific educational context, it offers valuable insights into the pedagogical integration of AI within Arabic speaking instruction under continued lecturer supervision.

This study has several limitations that should be considered when interpreting the findings. First, the research was conducted within a single Arabic Language Education program, limiting the transferability of the findings to other educational contexts. Second, the study focused on students' experiences and learning practices rather than directly measuring improvements in speaking proficiency. Future studies are therefore encouraged to combine qualitative and quantitative approaches to examine the relationship between AI utilization, Arabic speaking development, and broader linguistic competence across diverse educational settings.

²⁵ Wayne Holmes, Maya Bialik, and Maya Bialik. *Artificial Intelligence in Education: Promises and Implications for Teaching and Learning*. Boston: Center for Curriculum Redesign, 2019.

Conclusion

This study demonstrates that Artificial Intelligence (AI) functions as a source of linguistic support in *Mahārah Kalām* learning by assisting students in addressing challenges encountered during Arabic oral production. The findings indicate that students primarily utilize AI to retrieve contextually appropriate vocabulary, review sentence structures according to the principles of *nahwu* and *ṣarf*, and prepare themselves before participating in classroom speaking activities. Accordingly, AI is employed not as a replacement for language instruction but as a complementary tool that supports students in overcoming common linguistic difficulties. The findings also suggest that students perceive positive changes in their learning experiences, particularly in terms of preparedness for speaking practice, although linguistic validation continues to rely on lecturer guidance.

These findings imply that AI integration in Arabic language learning should be viewed as part of a broader pedagogical strategy rather than merely as the adoption of educational technology. Within the context of *Mahārah Kalām*, AI can support the preparation stage of speaking activities by facilitating vocabulary retrieval, providing preliminary grammatical checking, and enabling independent practice before classroom communication takes place. At the same time, lecturers remain central to the learning process by providing clarification, corrective feedback, and validation of AI-generated outputs. Consequently, this study contributes to the literature by demonstrating that AI's primary educational value lies in supporting linguistic production while complementing, rather than replacing, the pedagogical role of instructors.

This study is limited by its focus on a single academic program and a relatively small group of participants; therefore, the findings are not intended to be generalized to all Arabic language learning contexts. Furthermore, the study emphasizes students' experiences with AI rather than measuring long-term improvements in speaking proficiency. Future research should involve more diverse participants, compare multiple educational contexts, and integrate qualitative and quantitative approaches to investigate the relationship between AI utilization, linguistic development, and *Mahārah Kalām* performance. Further studies may also explore how different AI platforms provide support for specific linguistic dimensions of Arabic language learning.

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