



Alibbaa': Jurnal Pendidikan Bahasa Arab

Special Issue Vol. 01 2026

P-ISSN: 2721-1606 | E-ISSN: 2716-4985

doi: <https://doi.org/10.19105/ajpba.vi.24566>

Arabic Scrabble as a Game-Based Learning Innovation for Vocabulary Mastery in AI-Oriented Arabic Education

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Abstract

This study investigates the implementation of Arabic Scrabble as a game-based learning innovation for enhancing Arabic vocabulary mastery among seventh-grade students at Darul Ihsan Modern Islamic Boarding School within the framework of AI-oriented Arabic education. The study responds to the continuing challenges of Arabic vocabulary learning, particularly students' difficulties in memorizing and using vocabulary communicatively in classroom interaction. Using a qualitative phenomenological case study approach, data were collected through non-participant observation, semi-structured interviews, and documentation involving Arabic teacher and seventh-grade students. The findings reveal that the implementation of Arabic Scrabble created a more interactive and student-centered learning environment by increasing learner engagement, collaborative learning, vocabulary retention, and students' confidence in using Arabic vocabulary. Through activities such as arranging Arabic letters into words, discussing meanings collaboratively, and constructing simple sentences, students became more active and motivated during the learning process. Furthermore, the study indicates that Arabic Scrabble reflects several characteristics associated with AI-oriented Arabic pedagogy, particularly interactive, adaptive, and engagement-based learning experiences. This study contributes to the discourse of game-based Arabic learning by positioning Arabic Scrabble not merely as an educational game, but as a pedagogical innovation that supports learner-centered Arabic education in modern Islamic boarding schools.

Keywords: *Arabic Scrabble; Game-Based Learning; Arabic Vocabulary Mastery; Learner Engagement; AI-Oriented Arabic Education*

Abstrak

Penelitian ini bertujuan untuk mengkaji implementasi Arabic Scrabble sebagai inovasi pembelajaran berbasis permainan dalam meningkatkan penguasaan kosakata bahasa Arab siswa kelas VII di Pesantren Modern Darul Ihsan dalam kerangka AI-oriented Arabic education. Penelitian ini dilatarbelakangi oleh masih adanya kesulitan siswa dalam menghafal dan menggunakan kosakata bahasa Arab secara komunikatif dalam proses pembelajaran. Penelitian menggunakan pendekatan kualitatif dengan jenis *phenomenological case study*. Data diperoleh melalui observasi nonpartisipatif, wawancara semi terstruktur, dan dokumentasi yang melibatkan guru bahasa Arab dan siswa kelas VII. Hasil penelitian menunjukkan bahwa penerapan Arabic Scrabble mampu menciptakan lingkungan pembelajaran yang lebih interaktif dan student-centered melalui peningkatan learner engagement, collaborative learning, vocabulary retention, serta rasa percaya diri siswa dalam menggunakan kosakata bahasa Arab. Melalui aktivitas menyusun huruf Arab menjadi kata, mendiskusikan makna secara kelompok, dan menyusun kalimat sederhana, siswa menjadi lebih aktif dan termotivasi dalam proses pembelajaran. Selain itu, penelitian ini menunjukkan bahwa Arabic Scrabble memiliki karakteristik pedagogis yang relevan dengan AI-oriented Arabic pedagogy, khususnya dalam menciptakan pengalaman belajar yang interaktif, adaptif, dan berbasis keterlibatan siswa. Penelitian ini berkontribusi pada pengembangan diskursus game-based Arabic learning dengan memposisikan Arabic Scrabble tidak hanya sebagai permainan edukatif, tetapi juga sebagai inovasi pedagogis yang mendukung pembelajaran bahasa Arab yang learner-centered di lingkungan pesantren modern.

Kata Kunci: *Arabic Scrabble; Pembelajaran Berbasis Permainan; Penguasaan Kosakata Bahasa Arab; Learner Engagement; AI-Oriented Arabic Education*

Introduction

Arabic language learning constitutes an essential component of Islamic education, particularly in modern Islamic boarding schools where Arabic functions not only as a formal academic subject but also as a medium for understanding primary Islamic sources such as the Qur'an and Hadith.¹ Amid the ongoing transformation of global education and the rapid advancement of digital technology, Arabic

¹ Astuti, Mardiah, Fajri Ismail, Siti Fatimah, Weni Puspita, and Herlina Herlina. "The Relevance Of The Merdeka Curriculum In Improving The Quality Of Islamic Education In Indonesia." *International Journal of Learning, Teaching and Educational Research* 23, no. 6 (June 2024): 56–72. <https://doi.org/10.26803/ijlter.23.6.3>.

language instruction is increasingly required to adopt more interactive, innovative, and learner-oriented pedagogical approaches that align with the demands of twenty-first-century education.² Nevertheless, Arabic language teaching practices in many Islamic educational institutions remain dominated by conventional methods centered on memorization and one-way knowledge transmission, resulting in low learner engagement, limited learning motivation, and minimal active participation during the learning process.

One of the major challenges in Arabic language learning is the low level of vocabulary mastery (*mufradat*). Vocabulary mastery plays a fundamental role as the foundation of listening (*istima'*), speaking (*kalam*), reading (*qira'ah*), and writing (*kitabah*) skills.³ Without sufficient vocabulary knowledge, students encounter difficulties in understanding texts, constructing sentences, and using Arabic communicatively. Furthermore, the phonological, morphological, and syntactic characteristics of Arabic, which differ significantly from students' native languages, present additional challenges in the learning process.⁴ Therefore, vocabulary instruction should not rely solely on rote memorization but must incorporate learning strategies that enable students to understand vocabulary meaning, usage, and contextual application in a more active and meaningful manner.

To address these challenges, game-based learning has increasingly been recognized as an effective pedagogical innovation in language education.⁵ This approach emphasizes interaction, challenge,

² Bela Noviana Dewi. "Media Film Untuk Pembelajaran Maharah Istima' Di Pondok Pesantren Modern Gontor Putri: Implementasi Dan Analisis Respon Santriwati." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 3, no. 2 (July 2022): 124–40. <https://doi.org/10.19105/ajpba.v3i2.6176>.

³ Fu'adah, Shofwatul. "Tathbiq Tiknûlûjiyâ (Istirâtijiyah al-Kharîthah al-Dzihniyah) Li Hilli Musykilah Ta'lim Mufradât al-Lughah al-'Arabiyah Lada Thullâb al-Fashl al-Sâbi' Fî al-Madrasah al-Tsânawiyah 'Nurul Jadid Banyuputih - Situbondo.'" *Alibbaa': Jurnal Pendidikan Bahasa Arab* 1, no. 2 (August 2020): 197–209. <https://doi.org/10.19105/ajpba.v1i2.3572>.

⁴ Husisy-Sabek, Rabia, Rania Hussein Farraj, and Noam Lapidot-Lefler. "Arabic Creates an Atmosphere of Safety Because It Is Our Mother Tongue: Inclusive Training for Arab Students at a Teacher Training College in Israel." *Journal of Multilingual and Multicultural Development* 46, no. 4 (April 2025): 1307–21. <https://doi.org/10.1080/01434632.2023.2236979>.

⁵ Thurairasu, Vanitha. "Gamification-Based Learning as The Future of Language Learning: An Overview." *European Journal of Humanities and Social Sciences* 2, no. 6 (November 2022): 62–69. <https://doi.org/10.24018/ejsocial.2022.2.6.353>.

collaboration, and active learner engagement throughout the learning process. Through game elements, students are not merely passive recipients of information but become directly involved in more enjoyable and communicative learning activities.⁶ One educational game relevant to Arabic vocabulary learning is Arabic Scrabble. This game encourages students to arrange Arabic letters into meaningful vocabulary items, discuss word meanings collaboratively with peers, and apply the vocabulary in simple sentences. Consequently, the learning process shifts from rote memorization toward a more interactive, collaborative, and engagement-oriented learning experience.

At the same time, the development of artificial intelligence (AI) in education has introduced a new paradigm of language learning that is more adaptive, interactive, and learner-centered. Contemporary language education increasingly emphasizes learning environments that promote engagement, personalized learning experiences, and active participation.⁷ In this context, educational games such as Arabic Scrabble may be viewed as part of a pedagogical approach that supports the development of AI-oriented Arabic education, namely a learning environment that emphasizes active interaction, collaboration, adaptability, and learner engagement in the educational process. Although this study does not directly implement technical AI systems, the use of game-based learning through Arabic Scrabble reflects several characteristics of modern pedagogy that align with the broader direction of technology-enhanced and AI-oriented language learning environments.

Previous studies on game-based learning in Arabic language education have demonstrated that the use of educational games can significantly enhance students' engagement and learning motivation. The study conducted by Annas Azizt and Subiyanto on Digital Game-Based Learning (DGBL) in Arabic language instruction found that game-based learning improved students' academic performance

⁶ Loewen, Shawn, Dustin Crowther, Daniel R. Isbell, Kathy Minhye Kim, Jeffrey Maloney, Zachary F. Miller, and Hima Rawal. "Mobile-Assisted Language Learning: A Duolingo Case Study." *ReCALL* 31, no. 3 (September 2019): 293–311. <https://doi.org/10.1017/S0958344019000065>.

⁷ Zhang, Qi, and Zhonggen Yu. "Meta-Analysis on Investigating and Comparing the Effects on Learning Achievement and Motivation for Gamification and Game-Based Learning." *Education Research International* 2022 (August 2022): 1–19. <https://doi.org/10.1155/2022/1519880>.

compared to conventional teaching methods.⁸ Similarly, research by Ilya Husna et al. on the use of Mobile Legends in Arabic language learning revealed that digital games were effective in enhancing students' creative thinking, learning motivation, and learner engagement throughout the learning process.⁹ These findings indicate that elements of play, challenge, and interaction in game-based learning can create more active and enjoyable language learning experiences compared to traditional instructional approaches.

Other studies on vocabulary learning through games have also shown that game-based language learning can improve students' vocabulary retention and contextualized learning. Chowdhury et al. explained that game-based vocabulary instruction provides more contextual and meaningful learning experiences because students are actively involved in the process of language use.¹⁰ In addition, a systematic review conducted by Esteban on game-based learning in Arabic language education demonstrated that game-based instruction could enhance learner engagement, collaborative learning, and students' language communication skills through interactive and learner-centered activities.¹¹ These studies reinforce the argument that language learning through games plays an important role in creating more communicative and participatory learning environments.

Nevertheless, most previous studies have primarily focused on digital game-based learning and general educational contexts, while research on the implementation of Arabic Scrabble in Arabic vocabulary

⁸ Azitz, Annas, and Subiyanto Subiyanto. "Digital Game-Based Learning in Arabic Language Learning and Its Effects on Students' Academic Performance." *Proceedings of the International Conference on Indonesian Technical Vocational Education and Association (APTEKINDO 2018)* (Paris, France), 2018. <https://doi.org/10.2991/aptekindo-18.2018.13>.

⁹ Husna, Ilya, Zikrawahyuni Maiza, Suci Ramadhanti Febriani, Rahmat Satria Dinata, and Fauzul Fil Amri. "Digital Game-Based Learning: Exploring the Use of Mobile Legends in Arabic Language Skills." *Al-Ta'rib : Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya* 12, no. 1 (June 2024): 1–16. <https://doi.org/10.23971/altarib.v12i1.8015>.

¹⁰ Chowdhury, Mahjabin, L. Quentin Dixon, Li-Jen Kuo, Jonan Phillip Donaldson, Zohreh Eslami, Radhika Viruru, and Wen Luo. "Digital Game-Based Language Learning for Vocabulary Development." *Computers and Education Open* 6 (June 2024): 100160. <https://doi.org/10.1016/j.caeo.2024.100160>.

¹¹ Esteban, Allan Jay. "Theories, Principles, and Game Elements That Support Digital Game-Based Language Learning (DGBLL): A Systematic Review." *International Journal of Learning, Teaching and Educational Research* 23, no. 3 (March 2024): 1–22. <https://doi.org/10.26803/ijlter.23.3.1>.

learning within modern Islamic boarding schools remains relatively limited. Furthermore, studies connecting game-based Arabic learning with AI-oriented Arabic education are still scarce. Therefore, this study offers a new perspective by positioning Arabic Scrabble not merely as an educational game for vocabulary instruction, but also as a pedagogical innovation that supports learner engagement, collaborative vocabulary learning, and more interactive Arabic language instruction relevant to the development of AI-oriented learning environments.

Although various previous studies have examined the use of game-based learning and Arabic Scrabble media in improving Arabic vocabulary mastery, most of these studies have focused on general school settings or have merely positioned Arabic Scrabble as a conventional educational game in language instruction. Research investigating how educational games may contribute to modern pedagogy and AI-oriented learning environments in Arabic language education, particularly within modern Islamic boarding schools, remains limited. In fact, modern Islamic boarding schools possess unique educational characteristics because Arabic is not only studied as an academic subject but also functions as part of students' educational culture and daily activities. Therefore, this study provides a new perspective by positioning Arabic Scrabble not only as an educational game but also as a pedagogical innovation that supports learner engagement, collaborative learning, and the development of more interactive Arabic language instruction within the context of Islamic boarding school education.

Based on the foregoing discussion, this study aims to analyze the Arabic vocabulary mastery of seventh-grade students, describe the implementation of Arabic Scrabble as a game-based learning strategy in Arabic language instruction, explore students' engagement and interaction during the learning process, and examine the pedagogical contribution of Arabic Scrabble in supporting AI-oriented Arabic language education.

Method

This study employed a qualitative approach using a phenomenological case study design to gain an in-depth understanding of students' experiences in learning Arabic vocabulary through the Arabic Scrabble game within the context of a modern Islamic boarding school.¹² This approach was selected because the study was not oriented toward statistical measurement or quantitative hypothesis testing, but rather focused on understanding the learning process, learner engagement, classroom interaction, and pedagogical experiences emerging from the implementation of game-based learning in Arabic language instruction. Furthermore, the phenomenological approach enabled the researchers to explore how students and teachers perceived the use of Arabic Scrabble as a vocabulary learning innovation within the evolving context of interactive and AI-oriented Arabic education.

The study was conducted at Darul Ihsan Modern Islamic Boarding School, Hamparan Perak, Deli Serdang Regency, North Sumatra. The research site was selected because the institution implements intensive Arabic language instruction in both academic activities and students' daily routines, making it a relevant context for examining the implementation of game-based learning innovations. The study was carried out over approximately two months, including the stages of data collection, data processing, and data analysis.

Research participants were selected using purposive sampling by considering the direct involvement of informants in the implementation of Arabic Scrabble for Arabic vocabulary learning. The primary participants consisted of one Arabic language teacher and nineteen seventh-grade students. Purposive sampling was employed because qualitative research emphasizes the depth of data and the relevance of participants' experiences rather than statistical representation. Therefore, the selected participants were individuals who had direct experience with the use of Arabic Scrabble in Arabic language learning.

The data sources consisted of primary and secondary data. Primary data were obtained directly through observations and interviews with teachers and students involved in Arabic Scrabble-based learning activities. These data included students' learning experiences, learner engagement during classroom activities, peer interaction, responses

¹² John W. Creswell, and Cheryl N. Poth. *Qualitative Inquiry and Research Design*. 5th ed. SAGE Publications, Inc, 2023.

toward the game, and the teacher's perspectives regarding the contribution of Arabic Scrabble to Arabic vocabulary mastery. Secondary data were obtained from supporting documents such as lesson records, instructional materials, classroom activity documentation, and relevant literature related to game-based learning, Arabic vocabulary instruction, and technology-enhanced language pedagogy.

Data collection techniques included non-participant observation, semi-structured interviews, and documentation. Non-participant observation was conducted by directly observing the Arabic vocabulary learning process using Arabic Scrabble without the researcher's active involvement in the gameplay activities. The observations focused on learner engagement, group dynamics, classroom interaction, students' enthusiasm, and the teacher's role during the learning process. Semi-structured interviews were conducted with the Arabic teacher and several seventh-grade students to obtain more in-depth information regarding students' vocabulary mastery, learning experiences using Arabic Scrabble, and their perceptions of the game's effectiveness in enhancing learning motivation and engagement. Documentation was used to support the research findings through lesson notes, activity photographs, and other documents relevant to the research focus.

Data analysis in this study employed the interactive model developed by Miles, Huberman, and Saldaña, consisting of three major stages: data reduction, data display, and conclusion drawing.¹³ During the data reduction stage, the researchers selected and focused on data relevant to the research objectives, particularly data related to vocabulary mastery, learner engagement, collaborative learning, and the implementation of Arabic Scrabble in Arabic language instruction. The data were subsequently presented in thematic descriptive narratives to illustrate patterns of learning experiences and classroom dynamics that emerged throughout the study. The final stage involved drawing conclusions and continuously verifying the findings based on field data to ensure the validity of the research interpretations.

To ensure the trustworthiness of the study, the researchers applied technique triangulation and source triangulation by comparing data obtained from observations, interviews, and documentation. In addition, member checking was conducted with the informants to

¹³ Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Thousand Oaks, CA: SAGE Publications, 2014.

confirm the accuracy of data interpretation based on participants' actual experiences. These procedures were intended to enhance the credibility and validity of the findings so that the study could provide a more comprehensive and in-depth understanding of the learning phenomenon within the context of game-based Arabic learning and AI-oriented Arabic education.

Results and Discussion

The findings of this study indicate that the Arabic vocabulary mastery of seventh-grade students at Darul Ihsan Modern Islamic Boarding School, Hamparan Perak, remained at a low to moderate level. Initial observations revealed that Arabic vocabulary instruction had previously been dominated by conventional methods, particularly vocabulary note-taking and rote memorization directed by the teacher. In this process, students were typically asked to copy new vocabulary items along with their meanings and memorize them for repetition in subsequent lessons. This condition caused some students to appear less active during classroom activities. Several students also seemed to lack confidence when asked to recall previously learned vocabulary or use it in simple sentences. Moreover, the learning atmosphere tended to be monotonous, causing students to become easily bored during vocabulary instruction.

Students' difficulties in vocabulary mastery became evident when the teacher asked them to recall vocabulary learned in previous lessons. Some students were able to mention basic vocabulary items such as مدرسة (school), كتاب (book), قلم (pen), and كرسي (chair), but they struggled to remember more complex vocabulary or apply it in simple communicative contexts. The seventh-grade Arabic teacher also explained that students often understood vocabulary meanings separately but became confused when required to construct simple sentences using those words. For example, when students were asked to use vocabulary such as يكتب (to write) or يقرأ (to read) in sentences, some still encountered difficulties in constructing basic structures such as "يكتب الطالب الدرس" ("The student writes the lesson") or "يقرأ أحمد الكتاب" ("Ahmad reads the book"). These findings indicate that students' vocabulary mastery had not yet developed in an applicative manner and remained limited to memorizing isolated word meanings.

The classroom atmosphere began to change when the teacher implemented Arabic Scrabble in Arabic vocabulary instruction. In its implementation, the teacher divided the nineteen students into five groups consisting of four to five students each. Every group received sets of Arabic letter tiles used to arrange vocabulary items according to the lesson topic being studied. In one learning session, the teacher introduced the theme “school environment” with vocabulary items such as مدرسة (school), فصل (classroom), سبورة (whiteboard), نافذة (window), باب (door), حقيبة (bag), and مكتبة (library). Students were asked to arrange Arabic letters into correct vocabulary items and discuss their meanings collaboratively with group members. After successfully forming words, students were directed to use the vocabulary in simple sentences according to their ability levels.

During the gameplay process, students appeared significantly more active compared to previous learning sessions. They discussed appropriate letter arrangements, corrected each other’s word constructions, and attempted to recall previously learned vocabulary. For instance, when one group successfully arranged the word مكتبة (library), other students attempted to develop the word into simple sentences such as “أذهب إلى المكتبة” (“I go to the library”) or “المكتبة كبيرة” (“The library is large”). These activities indicate that students were not merely memorizing vocabulary but were beginning to use words in simple contextual communication. In addition, the competitive element of the game increased students’ enthusiasm to discover as many vocabulary items as possible in order to achieve the highest score for their groups.

Based on classroom observations, the implementation of Arabic Scrabble significantly increased learner engagement during the learning process. Students who had previously tended to be passive became more active in discussions and group participation. Throughout the game sessions, the classroom atmosphere became livelier as students asked questions, assisted their peers, and collaboratively constructed new vocabulary. One student stated that learning through games felt more enjoyable because it prevented boredom during lessons. The student also explained that memorizing vocabulary became easier through gameplay compared to merely memorizing from notebooks. Furthermore, students felt more confident when attempting to use new vocabulary because the learning environment became more relaxed and less intimidating.

The implementation of Arabic Scrabble also demonstrated the emergence of collaborative learning within Arabic language instruction. Each group worked cooperatively to construct vocabulary items and understand their meanings. When one group member did not understand the meaning of a particular word, other students assisted by explaining the meaning and demonstrating its use. For example, when a student did not understand the meaning of نافذة (window), another group member explained its meaning and collaboratively constructed a simple sentence such as "النافذة مفتوحة" ("The window is open"). Such collaborative activities indicate that the learning process no longer occurred solely between teacher and students but also developed through peer interaction. Therefore, Arabic Scrabble functioned not only as an educational game medium but also as a form of social learning that helped students construct vocabulary understanding collectively.

The seventh-grade Arabic teacher explained that Arabic Scrabble helped students recognize Arabic letters more quickly, remember vocabulary more effectively, and understand word usage in simple contexts. According to the teacher, students became more motivated to participate in lessons because learning activities no longer centered exclusively on memorization. The teacher also believed that the game contributed to a more interactive and student-centered learning environment because students were directly involved in the learning process. In this context, Arabic Scrabble demonstrated characteristics of modern pedagogy emphasizing learner engagement, active interaction, and collaborative learning experiences. Although this study did not directly employ artificial intelligence technologies, the findings suggest that game-based learning through Arabic Scrabble aligns with the broader direction of AI-oriented Arabic education, particularly in promoting interactive, adaptive, and learner-centered learning experiences.

Nevertheless, the implementation of Arabic Scrabble still encountered several challenges. The teacher explained that limited instructional time prevented the game from being implemented optimally in every classroom session. In addition, differences in students' abilities meant that some students still required more intensive guidance when arranging vocabulary or constructing simple sentences. The teacher also needed to prepare the game materials carefully to ensure

that the learning process remained effective and aligned with the intended instructional objectives. However, overall findings demonstrate that Arabic Scrabble contributed positively to Arabic vocabulary learning among seventh-grade students by enhancing learning motivation, learner engagement, collaborative learning, and students' ability to remember and use Arabic vocabulary more actively and communicatively.

Discussion

The findings of this study indicate that the low level of Arabic vocabulary mastery among seventh-grade students cannot be separated from the dominance of conventional instructional methods that continue to emphasize rote memorization and mechanical repetition of vocabulary items. In the context of language learning, vocabulary mastery is not merely associated with the ability to recall word meanings but also involves the ability to use vocabulary communicatively in meaningful contexts. Therefore, students' difficulties in constructing simple sentences using previously learned vocabulary suggest that prior instructional practices had not fully provided opportunities for active language use. This condition demonstrates that vocabulary instruction overly centered on memorization tends to produce weak retention because students are not directly engaged in authentic language use.¹⁴ In Arabic language learning, contextual and repeated exposure to vocabulary through interactive activities plays a crucial role in helping students develop stronger comprehension and memory retention of learned vocabulary.¹⁵

The findings further reveal that the implementation of Arabic Scrabble created a more active and participatory learning environment compared to previous instructional methods. The incorporation of game elements encouraged students to engage directly in learning activities

¹⁴ Yeni Ghonivita, John Pahamzah, Syafrizal Syafrizal, and Murti Ayu Wijayanti. "Improving Students' Listening Skill and Vocabulary Masteryn through Contextual Teaching and Learning (CTL) By Using Online Learning for Senior High School." *International Journal of English Language and Linguistics Research* 9, no. 4 (2021): 45–56.

¹⁵ Haniff Mohd Tahir, Mohd, Intan Safinas Mohd Ariff Albakri, Airil Haimi Mohd Adnan, Mohamad Syafiq Ya Shaq, and Dianna Suzieanna Mohamad Shah. "The Application of Visual Vocabulary for ESL Students' Vocabulary Learning." *Arab World English Journal* 11, no. 2 (June 2020): 323–38. <https://doi.org/10.24093/awej/vol11no2.23>.

through arranging letters, discovering vocabulary, discussing word meanings, and developing vocabulary into simple sentences. From the perspective of game-based learning, elements of challenge, competition, and interaction embedded in the game enhanced learner engagement¹⁶ because students became more emotionally and cognitively involved throughout the learning process.¹⁷ This was reflected in students' increased enthusiasm, greater confidence in using new vocabulary, and improved concentration during classroom activities.

Moreover, the use of Arabic Scrabble demonstrates that students' engagement in Arabic language learning is influenced not only by instructional content but also by enjoyable and interactive learning experiences. When students learned through games, they no longer perceived Arabic learning as a monotonous and stressful activity. Instead, the learning process transformed into a more communicative and competitive experience that enhanced students' learning motivation.¹⁸ In this context, Arabic Scrabble functioned not merely as an educational game medium but also as a pedagogical strategy capable of establishing an engagement-based learning environment in Arabic language instruction. These findings reinforce the argument that game-based learning can enhance students' motivation and engagement by providing opportunities for learning through more active, challenging, and collaborative activities.¹⁹

The implementation of Arabic Scrabble also highlights the importance of collaborative learning in Arabic vocabulary instruction.

¹⁶ Mubarak, Faiz Ushbah, and Atiqah Nurul Asri. "The Benefits of Android Applications for an Independent Learning in Learning English Language." *Journal of Language, Literature, and English Teaching (JULIET)* 2, no. 2 (September 2021): 8–15. <https://doi.org/10.31629/juliet.v2i2.3692>.

¹⁷ Khuluq, Muchsinul, Mamluatul Hasanah, Muasshomah Muasshomah, and Nurul Imamah. "Mobile-Assisted Language Learning Apps: The Analysis of Duolingo." *Al-Ta'rib : Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya* 12, no. 2 (December 2024): 229–46. <https://doi.org/10.23971/altarib.v12i2.8806>.

¹⁸ Zou, Di, Yan Huang, and Haoran Xie. "Digital Game-Based Vocabulary Learning: Where Are We and Where Are We Going?" *Computer Assisted Language Learning* 34, nos. 5–6 (July 2021): 751–77. <https://doi.org/10.1080/09588221.2019.1640745>.

¹⁹ Annida Zulfa, Hamsi Mansur, Monry Fraick Nicky Gillian Ratumbusang, Martine Warren, and Terry Harris. "Developing an Innovative Board Game Using a Cooperative Learning Approach to Foster Interest in Learning Arabic." *Alibbaa' : Jurnal Pendidikan Bahasa Arab* 6, no. 1 (January 2025): 99–119. <https://doi.org/10.19105/ajpba.v6i1.17834>.

Group-based learning activities encouraged students to discuss, assist, and share understanding regarding the vocabulary being studied.²⁰ When students collaboratively constructed words such as مدرسة (school), مكتبة (library), نافذة (window), or حقيبة (bag), they were not only memorizing word forms but also discussing meanings and applications within simple sentences. These peer interactions indicate that vocabulary learning became a social process built through communication and group collaboration.²¹ From the perspective of student-centered learning, learning processes involving social interaction enable students to construct understanding more actively than individual learning approaches focused solely on memorization.²²

The process of collaborative vocabulary learning that emerged during gameplay also demonstrated that students gained more meaningful learning experiences through direct interaction with peers. When one group member did not understand the meaning of a vocabulary item, other students assisted by explaining the meaning and providing examples of its usage in simple sentences. Such activities indicate that Arabic language learning can develop into a process of shared knowledge construction rather than merely a transfer of information from teacher to students.²³ Consequently, Arabic Scrabble not only helped students remember vocabulary but also supported the development of simple communication skills and increased students' confidence in actively using Arabic.

Furthermore, the findings indicate that Arabic Scrabble is relevant to the development of modern pedagogy in language education, which emphasizes interactive, adaptive, and learner-centered instruction.

²⁰ Alkhannani, Badriah M. "The Effectiveness of Collaborative Teaching and Learning and Engaging Students as Partners on English Language Teaching in Saudi Arabia." *Theory and Practice in Language Studies* 11, no. 10 (October 2021): 1288–94. <https://doi.org/10.17507/tpls.1110.17>.

²¹ Thurairasu, Vanitha. "Gamification-Based Learning as The Future of Language Learning: An Overview." *European Journal of Humanities and Social Sciences* 2, no. 6 (November 2022): 62–69. <https://doi.org/10.24018/ejsocial.2022.2.6.353>.

²² Zubaidi, Ahmad. "DEVELOPMENT OF MAHÂRAH AL-ISTIMÂ' TEST INSTRUMENT FOR ELECTRONIC BASED ARABIC STUDENT USING THE KAHOOT! APPLICATION." *Arabiyat: Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban* 7, no. 1 (June 2020): 61–77. <https://doi.org/10.15408/a.v7i1.13002>.

²³ Harvey Arce, Norman Patrick, and Ana Maria Cuadros Valdivia. "Adapting Competitiveness and Gamification to a Digital Platform for Foreign Language Learning." *International Journal of Emerging Technologies in Learning (iJET)* 15, no. 20 (October 2020): 194. <https://doi.org/10.3991/ijet.v15i20.16135>.

Although this study did not directly implement artificial intelligence technologies in the learning process, the learning characteristics emerging through Arabic Scrabble reflect several key principles of AI-oriented Arabic education, particularly in creating learning environments that position students at the center of instruction, promote active interaction, and encourage collaborative engagement. In contemporary language education, AI-oriented pedagogy should not be understood solely as the technical use of AI technologies but also as a pedagogical approach emphasizing personalized, interactive, and engagement-based learning experiences.²⁴ Therefore, the use of Arabic Scrabble may be viewed as a pedagogical bridge toward more adaptive and learner-oriented Arabic language learning environments.

These findings also demonstrate that innovation in Arabic language instruction does not necessarily depend on complex digital technologies. Simple educational games such as Arabic Scrabble remain highly relevant in supporting modern Arabic language learning because they are capable of creating active and communicative learning interaction. Within the context of modern Islamic boarding schools, such approaches are particularly important because they enable teachers to provide more engaging Arabic instruction without eliminating the distinctive educational characteristics of pesantren learning traditions.²⁵ Accordingly, Arabic Scrabble may be positioned as a form of game-based Arabic learning that supports the transformation of Arabic pedagogy toward more interactive and learner-engagement-oriented instruction.

Nevertheless, this study also identified several challenges in the implementation of Arabic Scrabble. Limited instructional time became one of the primary constraints because the game required sufficient time to ensure optimal student participation. In addition, differences in students' abilities meant that some students still required more intensive guidance when arranging vocabulary and constructing simple sentences.

²⁴ Polakova, Petra, and Blanka Klimova. "Vocabulary Mobile Learning Application in Blended English Language Learning." *Frontiers in Psychology* 13 (May 2022). <https://doi.org/10.3389/fpsyg.2022.869055>.

²⁵ 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 | Istirotijyah Ta'lim al-Insya' 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>.

Therefore, teachers must prepare instructional game materials carefully and manage group activities effectively to ensure that learning objectives are achieved. These challenges indicate that the success of game-based learning is determined not only by the instructional media employed but also by teachers' pedagogical readiness in managing classroom interaction.

Overall, the findings demonstrate that Arabic Scrabble provides significant pedagogical contributions to Arabic vocabulary learning in modern Islamic boarding schools. The game enhanced learner engagement, collaborative learning, vocabulary retention, and students' confidence in using Arabic. Furthermore, Arabic Scrabble illustrates that interactive and student-centered Arabic language instruction may become part of the development of AI-oriented Arabic education that is more relevant to the demands of language learning in the modern educational era. Future studies may explore the integration of game-based learning with digital Arabic learning platforms or AI-assisted vocabulary learning systems to create more adaptive and personalized Arabic language learning experiences within Islamic educational environments.

Conclusion

Based on the findings of this study, it can be concluded that the implementation of Arabic Scrabble as a game-based learning strategy made a positive contribution to Arabic vocabulary instruction by enhancing learner engagement, learning motivation, collaborative interaction, and students' confidence in using Arabic vocabulary more actively. Through activities such as arranging letters, discussing word meanings, and developing vocabulary into simple sentences, students gained more communicative and student-centered learning experiences. Furthermore, the findings indicate that Arabic Scrabble possesses pedagogical relevance to the development of AI-oriented Arabic education because it is capable of creating interactive, adaptive, and engagement-oriented learning environments without eliminating the distinctive educational characteristics of modern Islamic boarding schools.

Nevertheless, this study still has several limitations. The research was conducted in only one classroom with a limited number of participants; therefore, the findings cannot yet be generalized to broader contexts of Arabic language learning. In addition, this study employed a qualitative approach and thus did not quantitatively measure

improvements in vocabulary mastery nor directly integrate artificial intelligence technologies into the learning process. Therefore, future studies are recommended to develop mixed-methods or quantitative experimental research designs in order to examine the effectiveness of Arabic Scrabble more comprehensively in relation to vocabulary retention and learner engagement. Future research may also integrate game-based Arabic learning with digital platforms or AI-assisted vocabulary learning systems to create more personalized, adaptive, and contextually relevant Arabic language learning experiences in the era of modern educational technology.

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