

THE MEMORY-GAME-ENHANCED GAME-BASED LEARNING MODEL: HOW EFFECTIVE IS IT IN STRENGTHENING STUDENTS' LEARNING INTEREST, SPECIFICALLY THEIR ATTENTION?

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Abstract: This study was motivated by the low level of students' learning interest in the Islamic Cultural History (Sejarah Kebudayaan Islam/SKI) subject at Pondok Pesantren Darul Huffaz Pesawaran, particularly in the attention aspect. Conventional teaching methods tend to be monotonous, causing students to become bored, lose focus, and show minimal engagement during lessons. These conditions highlight the need for innovative instructional strategies that can create an engaging and interactive learning environment. Therefore, this study aimed to examine the effectiveness of a Game-Based Learning (GBL) model using a memory game in enhancing students' learning interest, especially their attention during SKI learning. The research adopted a quantitative approach with a quasi-experimental method and a nonequivalent control group design. Two classes were selected as samples: an experimental class taught using the memory game-based GBL model and a control class taught through conventional instruction. Data on students' learning interest were collected using a validated and reliable questionnaire and analyzed through normality tests, homogeneity tests, and an independent samples t-test. The results showed that the data were normally distributed and homogeneous. The t-test yielded a significance value of 0.031 (< 0.05), indicating a significant difference between the experimental and control groups. These findings demonstrate that the memory game-based GBL model effectively improves students' learning interest, particularly in attention, as reflected in better focus, active participation, and concentration during learning. Thus, this model is an effective and innovative approach suitable for SKI instruction in the pesantren context.

Keywords: Game Based Learning, Learning Interest, Memory Game

Abstrak : Penelitian ini dilatarbelakangi oleh rendahnya minat belajar siswa pada mata pelajaran Sejarah Kebudayaan Islam (SKI) di Pondok Pesantren Darul Huffaz Pesawaran, khususnya pada indikator perhatian yang tampak lemah dalam pembelajaran konvensional. Pembelajaran yang monoton menyebabkan siswa mudah bosan, kurang fokus, dan tidak terlibat aktif dalam proses belajar. Kondisi tersebut mendorong perlunya inovasi pembelajaran yang mampu menciptakan suasana belajar yang menarik, interaktif, serta menstimulasi perhatian siswa secara konsisten. Oleh karena itu, penelitian ini bertujuan untuk mengetahui efektivitas model Game Based Learning berbasis memory game dalam meningkatkan minat belajar siswa, terutama pada aspek perhatian. Penelitian menggunakan pendekatan kuantitatif dengan metode quasi eksperimen dan desain nonequivalent control group design. Dua kelas dijadikan sampel penelitian, yaitu kelas eksperimen yang diberikan perlakuan melalui memory game dan kelas kontrol yang tetap menggunakan metode konvensional. Data dikumpulkan melalui angket minat belajar yang telah diuji validitas dan reliabilitasnya, kemudian dianalisis menggunakan uji normalitas, homogenitas, dan independent samples t-test. Hasil penelitian menunjukkan bahwa data berdistribusi normal dan homogen. Uji t menghasilkan nilai signifikansi 0,031 ($< 0,05$), yang berarti terdapat perbedaan signifikan antara kedua kelompok. Temuan ini menunjukkan bahwa Game Based Learning berbasis memory game efektif meningkatkan minat belajar siswa pada indikator perhatian, ditandai dengan meningkatnya fokus, keterlibatan aktif, dan konsentrasi siswa saat pembelajaran SKI. Kesimpulannya, model Game Based Learning berbasis memory game merupakan strategi pembelajaran yang efektif dan inovatif dalam meningkatkan minat belajar siswa, serta layak diterapkan dalam pembelajaran SKI di lingkungan pesantren.

Kata kunci : Game Based Learning, Minat Belajar, Memory Game

INTRODUCTION

The teaching of Islamic Cultural History (SKI) in pesantren not only serves to convey information regarding the development of Islamic civilization, but also aims to cultivate students' learning interest so that they feel engaged, enthusiastic, and actively involved in every stage of the learning process ¹. A strong interest in learning is

¹ Hastin Suprihatin Mulyanti, "The Influence of Interest in Learning and Student Discipline on Learning Outcomes Mediated By Learning Motivation (Study in Smpn 197 West Jakarta)," *NUANSA: Jurnal Penelitian Ilmu Sosial Dan Keagamaan Islam* 22, no. 1 (2025): 46–60, <https://doi.org/10.19105/nuansa.v22i1.19570>; Adetia Swarni, Herwin, and Sujati, "Testing the Construct Validity and Reliability of the Student Learning Interest Scale Using Confirmatory Factor Analysis (CFA)," *Jurnal Penelitian Pendidikan IPA* 10, no. 9 (2024): 6322–30, <https://doi.org/10.29303/jppipa.v10i9.8794>; Neliwati Neliwati et al., "Upaya Guru Pendidikan Agama Islam Dalam Meningkatkan Minat Belajar Siswa Madrasah Tsanawiyah," *Munaddhomah: Jurnal Manajemen Pendidikan Islam* 4, no. 2 (2023): 297–306, <https://doi.org/10.31538/munaddhomah.v4i2.351>; Yustinus Dwi Andriyanto, "Relationship between Learning Interest and Learning Outcomes of Catholic Religious Education Students in Grade III of St.Don Bosco Catholic Elementary School Palangkaraya," *Journal of Childhood Development* 4, no.

reflected in students' full attention to the material, their heightened curiosity, and their desire to understand every historical event in greater depth ². In an ideal condition, students demonstrate perseverance, active participation, and the ability to maintain focus throughout the learning process. As a subject rich in values and inspirational narratives, Islamic Cultural History (SKI) should be able to capture students' attention when delivered through creative and engaging teaching methods. When a strong learning interest is well established, students' cognitive, affective, and psychomotor engagement increases, thereby enabling the learning objectives to be achieved optimally ³.

However, the reality in the field shows that students' interest in the SKI subject remains low, particularly at Pondok Pesantren Darul Huffaz Pesawaran. The learning process tends to take place conventionally through monotonous lecture-based methods, causing students' attention to be easily diverted. The lack of variety in instructional strategies makes students quickly feel bored, struggle to maintain focus,

2 (2024): 459–69, <https://doi.org/10.25217/jcd.v4i2.5104>; Ari Wahyudi and Pradipta Annurwanda, "The Influence of Students' Interest in Learning on Learning Achievement in Class XI Students' Trigonometry Material," *Hipotenusa: Journal of Mathematical Society* 6, no. 1 (2024): 76–87, <https://doi.org/10.18326/hipotenusa.v6i1.1573>.

² Novia Nurul Chasanah, Rahma Sukmaningrum, and Erny Wahyuni, "The Influence of Learning Interest on Students Learning Outcomes in Subject," *Jurnal Penelitian Ilmu Pendidikan Indonesia* 2, no. 3 (2023): 338–43, <https://doi.org/10.31004/jpion.v2i3.158>; Hetty Elfina, Dede Ibrahim Muthawali, and Hamidah Nasution, "Analysis of Students Interest in Learning Mathematics at MAS Plus Al Ulum Medan," *International Journal Of Humanities Education and Social Sciences (IJHES)* 4, no. 4 (2025): 1565–72, <https://doi.org/10.55227/ijhess.v4i4.1472>; Annisa Fadliyana, Sekar Dwi Ardianti, and Denni Agung Santoso, "The Influence Of Interest In Learning On The Learning Outcomes Of Grade Iv Students In The Eyes Maths Lessons," *JPMI (Jurnal Pendidikan Matematika Indonesia)* 8, no. 2 (2023): 120–26, <https://doi.org/10.26737/jpmi.v8i2.4538>; Johana Kastanja and Hamid Patilima, "Optimizing Early Childhood Learning Interest through a Differentiated Learning Approach," *Journal of Childhood Development* 4, no. 1 (2024): 314–20, <https://doi.org/10.25217/jcd.v4i1.4031>; Sri Susanna Sembiring, Titik Ulfatun, and Rahmatika Dewi, "The Effect of Learning Interest and Learning Environment on Student Learning Outcomes in History Class X IPS," *Jurnal Pendidikan Ilmu Sosial (JPIS)* 33, no. 2 (2023): 169–79, <https://doi.org/10.37251/ijoer.v4i2.579>.

³ Zahratul Idami, "English for Young Learners: Identifying Students' Interest and Motivation in Learning English at Madrasah Ibtidaiyah," *Jurnal Basicedu* 6, no. 5 (2022): 9040–49; Mariana Damayanti and Irma Savitri Sadikin, "Factors Influencing Students' Interest towards Learning English as a Foreign Language," *Journal of English Language Teaching in Indonesia* 11, no. 2 (2023): 193–211; Alpina, Arafiq, and Atri Dewi Aziz, "The Correlation between Student's Interest and Their English Learning Outcomes: A Correlational Study at SMAN 5 Mataram," *Journal of English Education Forum (JEEF)* 5, no. 1 (2025): 38–42, <https://doi.org/10.29303/jeeef.v5i1.795>; Rintra Julis Primastami and Nur Hanifah Insani, "Investigating the Impact of Learning Interest on Student Achievement in Javanese Language Courses at State Senior High Schools," *AL-ISHLAH: Jurnal Pendidikan* 16, no. 4 (2024): 5897–5908, <https://doi.org/10.35445/alishlah.v16i4.5669>; Ana Theriana, Dewi Kartika Sari, and Etty Pratiwi, "E-Learning and Learning Interest Towards the Students' English Achievement," *Esteem Journal of English Education Study Programme* 4, no. 1 (2021): 44–51, <https://doi.org/10.31851/esteem.v4i1.5135>.

and become unenthusiastic about participating in the lessons. This condition weakens the primary indicator of learning interest—namely, attention—as many students do not pay attention to the teacher’s explanations, do not engage in discussions, and show little curiosity about the historical narratives being studied. As a result, the learning process becomes ineffective, and the intended learning objectives of SKI are not achieved optimally. This situation highlights the need for innovative instructional approaches capable of creating an engaging and interactive classroom atmosphere that consistently fosters students’ attention.

One solution that can be implemented is the use of a Game-Based Learning model based on memory games. This model integrates game elements into the learning process, thereby creating a learning atmosphere that is enjoyable, challenging, and motivating for students ⁴. Memory game involves activities such as matching cards, recalling information, and identifying pairs of images or concepts relevant to the SKI material. This process encourages students to focus, pay attention, and participate actively, as they are required to employ their concentration and memory capacity optimally. By incorporating game elements, students are no longer merely listening to the material; instead, they are directly engaged in activities that stimulate their curiosity and attention ⁵. This method is believed to significantly enhance students’ learning

⁴ Alfina Amalia Azizah et al., “Learning Interest : How Does the Effective of the Game-Based Learning and Team Games Tournament Models ?,” *Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI)* 5 (2025): 103–17, <https://doi.org/https://doi.org/10.53299/jppi.v5i1.939>; Alfi Diotama Saputra et al., “Game-Based English Learning for Young Learners: A Systematic Review,” *JEdu: Journal of English Education* 1, no. 3 (2021): 109–22, <https://doi.org/10.30998/jedu.v1i3.4752>; Adithya Dipta Raharjo, Agis Amelia Putri, and Hafiz Rekso Budi, “The Use of Game-Based Learning to Increase Student Engagement,” *Hipkin Journal of Educational Research* 1, no. 3 (2024): 299–310; Akmal Perdana, Auzil Mustaqim Herman, and Fiqih Hana Saputri, “Game Based Learning Using Construct for Basic English Vocabulary at Elementary School Students,” *G-Tech : Jurnal Teknologi Terapan* 9, no. 2 (2025): 938–46; Ni Kadek Anggi Cahya Susaniari and Made Hery Santosa, “A Systematic Review on The Implementation of Game-Based Learning to Increase EFL Students’ Motivation,” *Journal of English Language and Education* 9, no. 6 (2024): 77–87, <https://doi.org/10.31004/jele.v9i6.520>.

⁵ Yuyun Yulianingsih, Rengganis Kencana Putri, and Syamiah Syamiah, “How Good Is Your Memory Game Relates to Children’s Expressive Language Development,” *Al-Mudarris (Jurnal Ilmiah Pendidikan Islam)* 6, no. 2 (2023): 111–26, <https://doi.org/10.23971/mdr.v6i2.8016>; Aulia Agustina, Leonita Maria Efipianas Manihuruk, and Siska Situmeang, “The Effect Of Using Card Based Memory Games On Vocabulary Mastery Of The Seventh Grade Students at SMP Negeri 8 Pematang Siantar,” *DE_JOURNAL (Dharmas Education Journal)* 5, no. 2 (2024): 1262–69; Nanda Armelia et al., “Improving Students’ English Vocabulary Mastery Through the Learning Media ‘Card Games,’” *Jurnal Basicedu* 8, no. 1 (2024): 233–41, <https://journal.uin.ac.id/ajie/article/view/971>; Akmal Sabilie, Shokhibul Arifin, and Moch. Charis Hidayat, “Implementation of Game Based Learning in Supporting Students’ Concept Understanding at SMP Muhammadiyah 18 Surabaya,” *Al Qalam: Jurnal Ilmiah Keagamaan Dan Kemasyarakatan* 19, no. 4 (2025): 2260–72, <https://doi.org/10.35931/aq.v19i4.4708>; Ni

interest, particularly in the aspect of attention, which has long been the weakest point in the SKI learning process.

Various studies have shown that Game-Based Learning is effective in enhancing students' motivation, learning interest, and engagement across different subjects. Several studies report that educational games can strengthen attention, facilitate conceptual understanding, and create more meaningful learning experiences. However, most of these studies have focused on general subjects such as Science, Mathematics, or English. Research concerning the Game-Based Learning model in the context of SKI, particularly within pesantren settings, remains very limited. Moreover, previous studies have seldom employed memory games specifically as an approach to increasing learning interest. This constitutes the research gap addressed in the present study. The novelty of this research lies in the effort to combine the Game-Based Learning model with memory games to improve indicators of learning interest—especially students' attention—in the teaching of SKI in pesantren

This research is essential because learning interest is a fundamental factor that determines students' success in understanding and appreciating events in Islamic history. Without strong interest, students will struggle to grasp the values embedded in SKI learning. Instructional innovations such as Game-Based Learning supported by memory games are therefore necessary to address the low level of student attention while fostering a more enjoyable learning experience. In addition to providing practical solutions for SKI teachers in improving the quality of instruction, this study also offers theoretical contributions to the development of game-based learning models within the pesantren context. Hence, this research holds significant urgency as an effort to enhance learning effectiveness and to create a more dynamic, creative, and engaging learning environment for students.

METHOD

This study employs a quantitative approach using a quasi-experimental method with a nonequivalent control group design. The research was conducted at Pondok Pesantren Darul Huffaz Pesawaran, involving two classes as the sample. One class was

Luh Ayu Budi Hari Ningsih, "The Importance of Game-Based Learning in English Learning for Young Learners in the 21st Century," *The Art of Teaching English as a Foreign Language (TATEFL)* 4, no. 1 (2023): 25–30, <https://doi.org/10.36663/tatefl.v4i1.492>.

designated as the experimental group, which received treatment through a game-based learning model utilizing memory games, while the other class served as the control group and continued using conventional instructional methods. Data collection began with the administration of a pretest to measure students' learning interest prior to the intervention. The game-based learning model was then implemented in the experimental group over six instructional sessions, consisting of stages such as the teacher's explanation of the method, question-and-answer activities, the presentation of educational games, facilitation during gameplay, performance-based assessment, and students' reflection on their learning experience.

During the learning process, the researcher observed student engagement with a focus on learning interest, particularly student attention, which had been identified as weak in the initial test. This indicator was then revised and adjusted to align with the educational game activities. After all treatments were completed, a posttest was administered to measure changes in students' learning interest. The pretest and posttest results were analyzed using statistical tests to evaluate the effectiveness of the learning model.

The research instrument consisted of a learning interest questionnaire containing 15 statements, which underwent a validation process. Based on the validity test results, 12 items were deemed valid and suitable for use, while 3 items were considered invalid due to item-total correlation values falling below the minimum threshold. Reliability testing using the Cronbach's Alpha technique yielded a reliability coefficient of 0.825, indicating that the instrument possesses a very high level of reliability. Therefore, the instrument is considered appropriate for measuring students' learning interest, including the 'student attention' indicator, which was revised and further developed in this study

RESULT AND DISCUSSION :

A. Result

This study was conducted at Pondok Pesantren Darul Huffaz Pesawaran. Various data collection techniques were employed, including the administration of a non-test instrument in the form of a questionnaire. The following presents the data obtained through normality tests, homogeneity tests, and t-tests.

1. Normality Test

Tests of Normality							
Data	Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Data	1.00	.122	30	.200 [*]	.955	30	.225
	2.00	.165	30	.036	.954	30	.218

^{*}. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Tabel 1 . Normality Test

Based on the results of the normality test, it was observed that the significance values for both groups were above 0.05. In the first group, the Shapiro–Wilk significance value was 0.225, while in the second group it was 0.218. Since both p-values exceed 0.05, it can be concluded that the data for both groups are normally distributed. Thus, the assumption of normality has been satisfied.

2. Homogeneity Test

Test of Homogeneity of Variance					
Data		Levene Statistic	df1	df2	Sig.
	Based on Mean	.430	1	58	.515
Data	Based on Median	.583	1	58	.448
	Based on Median and with adjusted df	.583	1	57.584	.448
	Based on trimmed mean	.446	1	58	.507

Tabel 2. Homogeneity Test

The results of the homogeneity test indicated that all significance values for each indicator were above 0.05, whether based on the mean (0.515), median (0.448), or trimmed mean (0.507). These findings suggest that the variance between the experimental and control groups is homogeneous or equivalent. With the homogeneity assumption satisfied, the two groups can be compared fairly without concern that differences in variance will affect the results of hypothesis testing.

3. T-test

Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper
Data	Equal variances assumed	.430	.515	-2.210	58	.031	-2.00000	.90490	-3.81136 -1.88864
	Equal variances not assumed			-2.210	56.649	.031	-2.00000	.90490	-3.81228 -1.87772

Tabel 3. T-test

The results of the independent samples t-test showed that the Levene's Test value was 0.515 (> 0.05), indicating that the variances of the two groups were considered homogeneous, and the analysis was conducted under the assumption of equal variances. The t-value was recorded at -2.210 with a significance level of 0.031 (< 0.05), indicating a significant difference in means between the two groups. The mean difference of -2.000 and the confidence interval range not encompassing zero further reinforce that this difference is indeed significant.

B. Discussion

The questionnaire analysis results indicate that the Game-Based Learning model using memory games is effective in enhancing students' learning interest, particularly in the attention indicator. This is evidenced by increased student focus during learning, active engagement in the game, and sustained concentration while following the Islamic Cultural History (SKI) material. In the memory game, students are required to match important information quickly and accurately, compelling them to pay attention to details such as historical figures, events, dates, or Islamic historical concepts. This process helps students maintain their attention and avoid distractions, as the game is conducted in a competitive and challenging manner.⁶ A livelier and more interactive classroom

⁶ Louisa Sarah Kamanasa, Fredi Meyer, and Anaci Alerbitu, "Implementing Kahoot Application as Game-Based Learning to Enhance Students' Vocabulary at SMP Negeri Tiakur," *Kesejahteraan Bersama : Jurnal Pengabdian Dan Keberlanjutan Masyarakat* 1, no. 4 (2024): 120–27, <https://doi.org/10.62383/bersama.v1i4.731>; Karina Cahya Sari, Rusfandi Rusfandi, and Siane Herawati, "Exploring the Use of Game-Based Ice-Breaking Activities by English Teachers during the Teaching and Learning Process," *Journal of English Language and Education* 9, no. 6 (2024): 28–42, <https://doi.org/10.31004/jele.v9i6.584>; Gabriel Fredi Daar, Fithriyah Inda Nur Abida, and Fahri Fahri, "Interactive and Game-Based English Learning for Elementary Students Through Collaborative Teaching: A Case Qualitative Study," *Prima Magistra: Jurnal Ilmiah Kependidikan* 6, no. 4 (2025): 652–62, <https://doi.org/10.37478/jpm.v6i4.5767>; Saputra et al., "Game-Based English
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environment enables students to remain engaged and prevents them from becoming easily bored during the learning process.

The Game-Based Learning model has been shown to activate students' attention systems, as the memory game operates on the principles of rapid stimulus-response, visual engagement, and active recall. When students are presented with cards containing SKI information, they must carefully attend to each symbol, word, or image in order to accurately remember and associate them.⁷ This activity stimulates the brain regions responsible for focus and working memory, thereby preventing students' attention from being easily diverted. Additionally, the inclusion of score challenges, time limits, and group competition further motivates students to maintain their focus in order to win the game.⁸ Thus, the memory game mechanism not only provides entertainment but also cognitively supports the enhancement of attention, which serves as a crucial foundation for learning interest.

SKI material contains extensive historical information that requires the ability to remember details and understand the sequence of events. The memory game serves as a relevant strategy because it presents the material in an enjoyable manner while still demanding accuracy. When students match cards of historical figures with their roles, or events with their corresponding years, they are indirectly engaged in a repetitive learning process that remains engaging and far from monotonous.⁹ The repetition of information through this game format

Learning for Young Learners: A Systematic Review"; Lailatul Abidah, Ria Arista Asih, and Estu Widodo, "Digital Game-Based Learning as a Strategy to Expand Vocational Students' Vocabulary: A Mixed Methods Approach," *Journal of Education Technology* 7, no. 3 (2023): 419–28, <https://doi.org/10.23887/jet.v7i3.64778>.

⁷ Gilang Dwi Pratiwi et al., "Exergame: Exercise With Matching Memory Game On Cognitive Function And Physical Fitness Of The Elderly," *Jkg (Jurnal Keperawatan Global)* 9, no. 2 (2025): 104–19, <https://doi.org/10.37341/jkg.v9i2.1082>; Happy Kusuma Wardani and Siti Mukhtarotul Ummah, "Elevating Young Learners Vocabulary Mastery Through Kim'S Memory Game," *English Journal of Indragiri* 7, no. 2 (2023): 410–27, <https://doi.org/10.61672/eji.v7i2.2565>; Hyan Oktodia Basuki et al., "The Effect of Memory Games Therapy on the Cognitive Function of Older Adults," *Babali Nursing Research* 6, no. 2 (2025): 259–68, <https://doi.org/10.37363/bnr.2025.62466>.

⁸ Perdana, Herman, and Saputri, "Game Based Learning Using Construct for Basic English Vocabulary at Elementary School Students"; I.H. Sakdiyah, E.H. Maolida, and Vina Nurviyani, "Utilizing Baamboozle in Developing Students' English Grammar Mastery," *JALL (Journal of Applied Linguistics and Literacy)* 8, no. 1 (2024): 132–42.

⁹ Radoslava Topalska, Fatima Sapundzhi, and Abdulkadir Gur, "Memory Game: An Innovative Approach to Foreign Language Education with Mobile Technology," *TEM Journal* 14, no. 3 (2025): 2848–59, <https://doi.org/10.18421/tem143-84>; Estiningtyas Sholikhah and Fitrihya Anjarsari, "The Ilmuna: Jurnal Studi Pendidikan Agama Islam Vol. 7, No.2 September (2025) ISSN: 2715-9981. EISSN: 2715-9434. DOI: <https://doi.org/10.54437/ilmuna>.

helps reinforce focus, enhance memory retention, and sustain students' attention for longer periods compared to conventional methods¹⁰. Thus, memory game-based Game-Based Learning is not only engaging but also highly relevant to the characteristics of SKI, a subject dense with information.

The effectiveness of Game-Based Learning on learning interest, particularly the attention indicator, is supported by previous studies. A study by Najwa Azzahra¹¹ indicates that the use of educational games can enhance students' focus, as the games stimulate curiosity and emotional engagement. Another study by Siska Medila and Suryani¹² found that memory games help students sustain attention for longer periods by providing consistent visual stimuli and challenges. Meanwhile, a study by Safrida, Harahap, and Ramadhan¹³ revealed that Game-Based Learning enhances learning interest through increased attention, motivation, and peer interaction. Your study aligns with these findings, indicating that memory games are not merely a form of entertainment but also an effective medium for improving students' attention in SKI learning.

The effectiveness of this model is also influenced by the learning context at Pondok Pesantren Darul Huffaz Pesawaran, which features an intensive and structured learning atmosphere. The typically demanding schedule of pesantren activities necessitates fresh and varied instructional methods to help students maintain focus. The memory game introduces a new atmosphere distinct from

Metronome of Memory : Spaced Flip-Card Practice for Indonesian EFL Learners,” *JIMU: Jurnal Ilmiah Multidisipliner* 03, no. 03 (2025): 925–39; Dian Ardianti, St Asriati Am, and Andi Asri Jumiati, “Reinforcing Students Memory in Learning English Vocabulary Through Educandy Media,” *Indonesian Journal of Psycholinguistics* 1, no. 3 (2022): 96–104, <https://ojs.fkip.unismuh.ac.id/index.php/ijp>.

¹⁰ Zumrotul Fauziah and Siti Nur Khofidhotun Rofi'ah, “Enhancing Students' Writing Skills Through Game-Based Learning Media,” *Proceeding Al Ghazali International Conference* 1 (2024): 628–36; Nurul Hidayah, Sabarun Sabarun, and Hesty Widiastuty, “The Implementation of Game Based Learning (Gbl) Method To Improve Efl Students' Vocabulary Mastery,” *EDUSAINTEK: Jurnal Pendidikan, Sains Dan Teknologi* 11, no. 2 (2023): 557–69, <https://doi.org/10.47668/edusaintek.v11i2.1078>.

¹¹ Afifah Najwa Azzahra and Nurman Ginting, “Penerapan Metode Game Based Learning Dalam Upaya Meningkatkan Motivasi Belajar Siswa Kelas Viii Di Smp Muhammadiyah 4 Medan Helvetia,” *Hikamatzu Journal of Multidisiplin* 2, no. 1 (2024): 210–25.

¹² Siska Medila and Mulia Suryani, “Pengaruh Penerapan Model Pembelajaran Game Based Learning (GBL) Terhadap Pemahaman Konsep Matematika Siswa” 7 (2023): 29458–66.

¹³ Safrida, Syarifah Ainun Harahap, and Nuri Ramadhan, “Pengaruh Metode Game Based Learning Terhadap Minat Belajar Siswa Pada Mata Pelajaran Matematika Di Kelas V SDN 060799 Medan Labuhan” 3, no. 1 (2024): 93–96.

the typically serious learning routine, making students feel enthusiastic and better prepared to engage in lessons. Furthermore, the healthy competition inherent in the game fosters positive interactions among students, which emotionally supports enhanced attention. SKI teachers who are able to effectively implement the game also play a crucial role in ensuring that students feel challenged yet comfortable. The synergy of these factors leads to a significant increase in learning interest, particularly in the attention indicator.

CONCLUSION

The results of this study indicate that the use of memory game-based Game-Based Learning can enhance students' learning interest, particularly in the attention aspect. This effectiveness is evidenced by the significant difference between the experimental and control classes based on statistical analysis, including a t-test with a significance level of 0.031, confirming that this learning model has a positive impact on students' focus and engagement in SKI learning. Both theoretically and practically, this study offers novelty by applying a game-based learning model, which remains rarely utilized in SKI instruction within pesantren, particularly through the use of memory games that more effectively stimulate attention and working memory compared to conventional methods. Nonetheless, this study has limitations, such as a sample restricted to two classes in a single pesantren and a research focus solely on the attention indicator. Therefore, future research is expected to expand the variables, contexts, or types of educational games tested.

REFERENCE

- Abidah, Lailatul, Ria Arista Asih, and Estu Widodo. "Digital Game-Based Learning as a Strategy to Expand Vocational Students' Vocabulary: A Mixed Methods Approach." *Journal of Education Technology* 7, no. 3 (2023): 419–28. <https://doi.org/10.23887/jet.v7i3.64778>.
- Agustina, Aulia, Leonita Maria Efipnias Manihuruk, and Siska Situmeang. "The Effect Of Using Card Based Memory Games On Vocabulary Mastery Of The Seventh Grade Students at SMP Negeri 8 Pematang Siantar." *DE_JOURNAL (Dharmas Education Journal)* 5, no. 2 (2024): 1262–69.
- Alpina, Arafiq, and Atri Dewi Aziz. "The Correlation between Student's Interest and Their English Learning Outcomes: A Correlational Study at SMAN 5 Mataram." *Journal of English Education Forum (JEEF)* 5, no. 1 (2025): 38–42. <https://doi.org/10.29303/jee.v5i1.795>.

- Andriyanto, Yustinus Dwi. "Relationship between Learning Interest and Learning Outcomes of Catholic Religious Education Students in Grade III of St. Don Bosco Catholic Elementary School Palangkaraya." *Journal of Childhood Development* 4, no. 2 (2024): 459–69. <https://doi.org/10.25217/jcd.v4i2.5104>.
- Ardianti, Dian, St Asriati Am, and Andi Asri Jumiatiy. "Reinforcing Students Memory in Learning English Vocabulary Through Educandy Media." *Indonesian Journal of Psycholinguistics* 1, no. 3 (2022): 96–104. <https://ojs.fkip.unismuh.ac.id/index.php/ijp>.
- Armelia, Nanda, Imam Sudamarji, Hery Nuraini, Lastry Forsia, and Nirna Nirmala. "Improving Students' English Vocabulary Mastery Through the Learning Media 'Card Games.'" *Jurnal Basicedu* 8, no. 1 (2024): 233–41. <https://journal.uui.ac.id/ajie/article/view/971>.
- Azizah, Alfina Amalia, Nurul Azizah, Nur Asiah, and Jamal Fakhri. "Learning Interest : How Does the Effective of the Game-Based Learning and Team Games Tournament Models ?" *Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI)* 5 (2025): 103–17. <https://doi.org/https://doi.org/10.53299/jppi.v5i1.939>.
- Azzahra, Afifah Najwa, and Nurman Ginting. "Penerapan Metode Game Based Learning Dalam Upaya Meningkatkan Motivasi Belajar Siswa Kelas Viii Di Smp Muhammadiyah 4 Medan Helvetia." *Hikamatzu Journal of Multidisiplin* 2, no. 1 (2024): 210–25.
- Basuki, Hyan Oktodia, Siti Herlinda Oktafia, Suhartono, Dyah Pitaloka, Mei Widyawati, Lukman Hakim, Hanim Nur Faizah, Mokhamad Nurhadi, and Ahmad Fauziansyah. "The Effect of Memory Games Therapy on the Cognitive Function of Older Adults." *Babali Nursing Research* 6, no. 2 (2025): 259–68. <https://doi.org/10.37363/bnr.2025.62466>.
- Cahya Susaniari, Ni Kadek Anggi, and Made Hery Santosa. "A Systematic Review on The Implementation of Game-Based Learning to Increase EFL Students' Motivation." *Journal of English Language and Education* 9, no. 6 (2024): 77–87. <https://doi.org/10.31004/jele.v9i6.520>.
- Daar, Gabriel Fredi, Fithriyah Inda Nur Abida, and Fahri Fahri. "Interactive and Game-Based English Learning for Elementary Students Through Collaborative Teaching: A Case Qualitative Study." *Prima Magistra: Jurnal Ilmiah Kependidikan* 6, no. 4 (2025): 652–62. <https://doi.org/10.37478/jpm.v6i4.5767>.
- Damayanti, Mariana, and Irma Savitri Sadikin. "Factors Influencing Students' Interest towards Learning English as a Foreign Language." *Journal of English Language Teaching in Indonesia* 11, no. 2 (2023): 193–211.
- Dwi Pratiwi, Gilang, Wini Hadiyani, Vita Lucya, and Yuda Gumelar. "Exergame: Exercise With Matching Memory Game On Cognitive Function And Physical

- Fitness Of The Elderly.” *Jkg (Jurnal Keperawatan Global)* 9, no. 2 (2025): 104–19. <https://doi.org/10.37341/jkg.v9i2.1082>.
- Fadliyana, Annisa, Sekar Dwi Ardianti, and Denni Agung Santoso. “The Influence Of Interest In Learning On The Learning Outcomes Of Grade Iv Students In The Eyes Maths Lessons.” *JPMI (Jurnal Pendidikan Matematika Indonesia)* 8, no. 2 (2023): 120–26. <https://doi.org/10.26737/jpmi.v8i2.4538>.
- Fauziah, Zumrotul, and Siti Nur Khofidhotun Rofi’ah. “Enhancing Students’ Writing Skills Through Game-Based Learning Media.” *Proceeding Al Ghazali International Conference* 1 (2024): 628–36.
- Hetty Elfina, Dede Ibrahim Muthawali, and Hamidah Nasution. “Analysis of Students Interest in Learning Mathematics at MAS Plus Al Ulum Medan.” *International Journal Of Humanities Education and Social Sciences (IJHESS)* 4, no. 4 (2025): 1565–72. <https://doi.org/10.55227/ijhess.v4i4.1472>.
- Hidayah, Nurul, Sabarun Sabarun, and Hesty Widiastuty. “The Implementation of Game Based Learning (Gbl) Method To Improve Efl Students’ Vocabulary Mastery.” *EDUSAINTEK: Jurnal Pendidikan, Sains Dan Teknologi* 11, no. 2 (2023): 557–69. <https://doi.org/10.47668/edusaintek.v11i2.1078>.
- Idami, Zahratul. “English for Young Learners: Identifying Students’ Interest and Motivation in Learning English at Madrasah Ibtidaiyah.” *Jurnal Basicedu* 6, no. 5 (2022): 9040–49.
- Johana Kastanja, and Hamid Patilima. “Optimizing Early Childhood Learning Interest through a Differentiated Learning Approach.” *Journal of Childhood Development* 4, no. 1 (2024): 314–20. <https://doi.org/10.25217/jcd.v4i1.4031>.
- Louisa Sarah Kamanasa, Fredi Meyer, and Anaci Alerbitu. “Implementing Kahoot Application as Game-Based Learning to Enhance Students’ Vocabulary at SMP Negeri Tiakur.” *Kesejahteraan Bersama: Jurnal Pengabdian Dan Keberlanjutan Masyarakat* 1, no. 4 (2024): 120–27. <https://doi.org/10.62383/bersama.v1i4.731>.
- Medila, Siska, and Mulia Suryani. “Pengaruh Penerapan Model Pembelajaran Game Based Learning (GBL) Terhadap Pemahaman Konsep Matematika Siswa” 7 (2023): 29458–66.
- Mulyamti, Hastin Suprihatin. “The Influence of Interest in Learning and Student Discipline on Learning Outcomes Mediated By Learning Motivation (Study in Smpn 197 West Jakarta).” *NUANSA: Jurnal Penelitian Ilmu Sosial Dan Keagamaan Islam* 22, no. 1 (2025): 46–60. <https://doi.org/10.19105/nuansa.v22i1.19570>.
- Neliwati, Neliwati, Fawziyah Tansyah Siregar, Ali Akbar Siregar, and Helfinasyam Batubara. “Upaya Guru Pendidikan Agama Islam Dalam Meningkatkan Minat Belajar Siswa Madrasah Tsanawiyah.” *Munaddhomah: Jurnal Manajemen Pendidikan*

- Islam* 4, no. 2 (2023): 297–306.
<https://doi.org/10.31538/munaddhomah.v4i2.351>.
- Ningsih, Ni Luh Ayu Budi Hari. “The Importance of Game-Based Learning in English Learning for Young Learners in the 21st Century.” *The Art of Teaching English as a Foreign Language (TATEFL)* 4, no. 1 (2023): 25–30.
<https://doi.org/10.36663/tatefl.v4i1.492>.
- Novia Nurul Chasanah, Rahma Sukmaningrum, and Erny Wahyuni. “The Influence of Learning Interest on Students Learning Outcomes in Subject.” *Jurnal Penelitian Ilmu Pendidikan Indonesia* 2, no. 3 (2023): 338–43.
<https://doi.org/10.31004/jpion.v2i3.158>.
- Perdana, Akmal, Auzil Mustaqim Herman, and Fiqih Hana Saputri. “Game Based Learning Using Construct for Basic English Vocabulary at Elementary School Students.” *G-Tech : Jurnal Teknologi Terapan* 9, no. 2 (2025): 938–46.
- Primastami, Rintra Julis, and Nur Hanifah Insani. “Investigating the Impact of Learning Interest on Student Achievement in Javanese Language Courses at State Senior High Schools.” *AL-ISHLAH: Jurnal Pendidikan* 16, no. 4 (2024): 5897–5908. <https://doi.org/10.35445/alishlah.v16i4.5669>.
- Raharjo, Adithya Dipta, Agis Amelia Putri, and Hafiz Rekso Budi. “The Use of Game-Based Learning to Increase Student Engagement.” *Hipkin Journal of Educational Research* 1, no. 3 (2024): 299–310.
- Sabilie, Akmal, Shokhibul Arifin, and Moch. Charis Hidayat. “Implementation of Game Based Learning in Supporting Students’ Concept Understanding at SMP Muhammadiyah 18 Surabaya.” *Al Qalam: Jurnal Ilmiah Keagamaan Dan Kemasyarakatan* 19, no. 4 (2025): 2260–72.
<https://doi.org/10.35931/aq.v19i4.4708>.
- Safrida, Syarifah Ainun Harahap, and Nuri Ramadhan. “Pengaruh Metode Game Based Learning Terhadap Minat Belajar Siswa Pada Mata Pelajaran Matematika Di Kelas V SDN 060799 Medan Labuhan” 3, no. 1 (2024): 93–96.
- Sakdiyah, I.H., E.H. Maolida, and Vina Nurviyani. “Utilizing Baamboozle in Developing Students’ English Grammar Mastery.” *JALL (Journal of Applied Linguistics and Literacy)* 8, no. 1 (2024): 132–42.
- Saputra, Alfi Diotama, Livia Septiani, Rezki Adriani, and Hanna Sundari. “Game-Based English Learning for Young Learners: A Systematic Review.” *JEdu: Journal of English Education* 1, no. 3 (2021): 109–22.
<https://doi.org/10.30998/jedu.v1i3.4752>.
- Sari, Karina Cahya, Rusfandi Rusfandi, and Siane Herawati. “Exploring the Use of Game-Based Ice-Breaking Activities by English Teachers during the Teaching

- and Learning Process.” *Journal of English Language and Education* 9, no. 6 (2024): 28–42. <https://doi.org/10.31004/jele.v9i6.584>.
- Sembiring, Sri Susanna, Titik Ulfatun, and Rahmatika Dewi. “The Effect of Learning Interest and Learning Environment on Student Learning Outcomes in History Class X IPS.” *Jurnal Pendidikan Ilmu Sosial (JPIS)* 33, no. 2 (2023): 169–79. <https://doi.org/10.37251/ijoer.v4i2.579>.
- Sholikhah, Estiningtyas, and Fitrilya Anjarsari. “The Metronome of Memory : Spaced Flip-Card Practice for Indonesian EFL Learners.” *JIMU: Jurnal Ilmiah Multidisipliner* 03, no. 03 (2025): 925–39.
- Swarni, Adetia, Herwin, and Sujati. “Testing the Construct Validity and Reliability of the Student Learning Interest Scale Using Confirmatory Factor Analysis (CFA).” *Jurnal Penelitian Pendidikan IPA* 10, no. 9 (2024): 6322–30. <https://doi.org/10.29303/jppipa.v10i9.8794>.
- Theriana, Ana, Dewi Kartika Sari, and Etty Pratiwi. “E-Learning and Learning Interest Towards the Students’ English Achievement.” *Esteem Journal of English Education Study Programme* 4, no. 1 (2021): 44–51. <https://doi.org/10.31851/esteem.v4i1.5135>.
- Topalska, Radoslava, Fatima Sapundzhi, and Abdulkadir Gur. “Memory Game: An Innovative Approach to Foreign Language Education with Mobile Technology.” *TEM Journal* 14, no. 3 (2025): 2848–59. <https://doi.org/10.18421/tem143-84>.
- Wahyudi, Ari, and Pradipta Annurwanda. “The Influence of Students’ Interest in Learning on Learning Achievement in Class XI Students’ Trigonometry Material.” *Hipotenusa: Journal of Mathematical Society* 6, no. 1 (2024): 76–87. <https://doi.org/10.18326/hipotenusa.v6i1.1573>.
- Wardani, Happy Kusuma, and Siti Mukhtarotul Ummah. “Elevating Young Learners Vocabulary Mastery Through Kim’S Memory Game.” *English Journal of Indragiri* 7, no. 2 (2023): 410–27. <https://doi.org/10.61672/eji.v7i2.2565>.
- Yulianingsih, Yuyun, Rengganis Kencana Putri, and Syamiyah Syamiyah. “How Good Is Your Memory Game Relates to Children’s Expressive Language Development.” *Al-Mudarris (Jurnal Ilmiah Pendidikan Islam)* 6, no. 2 (2023): 111–26. <https://doi.org/10.23971/mdr.v6i2.8016>.