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Game-Based Kitabah Learning Innovation Using Smart Apps Creator at Pondok Pesantren Raudhatus Sakinah

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ABSTRACT
This study aims to develop a writing (kitabah) learning media based on a game using Smart Apps Creator (SAC) to enhance Arabic writing skills at Pondok Pesantren Raudhatus Sakinah, Ogan Komering Ilir Regency, South Sumatra. The type of research used is Research and Development (R&D) with the Borg and Gall model approach. The research subjects include 14 eighth-grade students and the Arabic language teacher at the pesantren. Data collection techniques involved questionnaires, tests, as well as interviews and observations. Quantitative data was gathered through pre-tests and post-tests to measure students' writing improvements after using the learning media, while qualitative data was obtained from interviews with teachers and observations during the media usage. Data analysis techniques included quantitative analysis using the Wilcoxon test to examine significant differences between pre-test and post-test scores, and qualitative analysis using the Miles and Huberman model to reduce, display, and draw conclusions from the collected data. The results show that the SAC-based learning media is valid according to assessments from content and media experts, and there is a significant improvement in students' writing skills after using the media, with the Wilcoxon test showing a significance value of less than 0.05. The implications of this research indicate that SAC-based game media can serve as an effective alternative to improve Arabic writing skills in pesantren, as well as provide prospects for further development of interactive learning media in other educational institutions.

***Keywords**: Gamification, Smart App Creator (SAC), Research and Development, Islamic Boarding Schools*

ABSTRAK
Penelitian ini bertujuan untuk mengembangkan media pembelajaran kitabah (menulis) berbasis game menggunakan Smart Apps Creator (SAC) untuk meningkatkan kemampuan menulis bahasa Arab di Pondok Pesantren Raudhatus Sakinah, Kabupaten Ogan Komering Ilir, Sumatera Selatan. Jenis penelitian yang digunakan adalah penelitian dan pengembangan (Research and Development / R&D) dengan pendekatan model Borg and Gall. Subjek penelitian terdiri dari 14 siswa kelas delapan dan guru bahasa Arab di pondok pesantren tersebut. Teknik pengumpulan data dilakukan melalui kuesioner, tes, serta wawancara dan observasi. Data kuantitatif dikumpulkan melalui pre-test dan post-test untuk mengukur peningkatan kemampuan siswa setelah menggunakan media pembelajaran, sedangkan data kualitatif diperoleh dari wawancara dengan guru dan observasi selama penggunaan media. Teknik analisis data yang digunakan meliputi analisis kuantitatif dengan uji Wilcoxon untuk menguji perbedaan signifikan antara nilai pre-test dan post-test, serta analisis kualitatif menggunakan model Miles dan Huberman untuk mereduksi, menyajikan, dan menarik kesimpulan dari data yang diperoleh. Hasil penelitian menunjukkan bahwa media pembelajaran berbasis game SAC valid menurut penilaian ahli materi dan ahli media, dan terdapat peningkatan signifikan pada kemampuan menulis siswa setelah menggunakan media tersebut, dengan hasil uji Wilcoxon menunjukkan nilai signifikansi lebih kecil dari 0,05. Implikasi dari penelitian ini adalah media berbasis game SAC dapat digunakan sebagai alternatif yang efektif untuk meningkatkan kemampuan menulis bahasa Arab di pesantren, serta memberikan prospek pengembangan lebih lanjut untuk media pembelajaran interaktif di lembaga pendidikan lainnya.

***Kata-kata Kunci**: Gamifikasi, Smart App Creator (SAC), Penelitian dan Pengembangan, Pondok Pesantren*

INTRODUCTION

The role of education in pesantren is crucial for enhancing the religious knowledge of students through Arabic language learning, which serves as a tool for understanding Islamic (Djuaeni & Usman, 2021; Syafei et al., 2024). However, the Arabic language teaching methods applied in many pesantren still use traditional approaches that are less adaptive to technological advancements (Nurkholis, 2017), although some pesantren institutions are still open to technology-based learning methods (Nasution et al., 2024). The limited and often monotonous use of learning media, such as direct teaching methods, fails to capture students' attention maximally, especially in this digital era. The lack of variation in learning media leads to students quickly losing interest and enthusiasm in following lessons, particularly in Arabic, which requires persistence and more complex writing skills. This directly impacts students' low learning outcomes and their limited understanding of the material being taught (Sharp et al., 2019; Shimray & and Wangdi, 2025).

In this context, the use of game-based learning media developed using Smart Apps Creator emerges as a relevant solution. This application utilizes smartphone features that are already familiar to students, and it can be accessed both offline and online. Smart Apps Creator enables users to create learning materials without the need to master programming, making it practical and easy to use (Mustafa et al., 2023). Arabic language learning, particularly writing skills (maharah al-kitabah), presents its own challenges. Writing in Arabic requires complex skills such as forming letters, mastering spelling, and organizing ideas logically and coherently (Aulia et al., 2024).

An initial observation conducted at Pesantren Raudhatus Sakinah Pedamaran Timur indicated that the educational approach in this pesantren still relies on traditional methods, such as lectures and question-and-answer sessions, with minimal use of learning media. This method causes students to quickly become bored and less enthusiastic about the lessons, especially in Arabic subjects. Furthermore, students' writing skills in Arabic at this pesantren are still relatively low. This was clearly evident in classroom practices, where many students struggled to write Arabic script correctly. Several factors contributing to this include a lack of practice, limited vocabulary knowledge, and a lack of supporting learning media. Students often appear unfocused and even sleepy during lessons. This situation suggests that the learning process is not being fully optimized due to the limited available resources and facilities.

Previous literature has revealed that the use of the Smart Apps Creator (SAC) application in developing learning media has shown significant results in enhancing learning effectiveness across various fields. (Junaidi & Busthomi, 2025) in their study on Arabic language learning, revealed that SAC can create a more interactive and enjoyable learning experience, thereby increasing student engagement in the learning process. A similar study by (Ratnasari & Ansori, 2024) on the use of SAC-based Problem-Based Learning to improve students' ability to write effective sentences in Indonesian language also yielded positive results. SAC-based media has proven effective in enhancing students' skills, with highly valid media and material validations. This shows that SAC applications are not only suitable for Arabic language learning but can also address challenges in teaching writing skills across various subjects.

Further research by (Aziz et al., 2024) on SAC-based interactive multimedia also demonstrated that this application is highly valid, practical, and effective in enhancing the ability to form letters into meaningful words. The findings of (Hasrullah et al., 2024) on the use of SAC to improve vocabulary skills further reinforce previous discoveries, showing a significant improvement in students' pre-test and post-test scores (S et al., 2021) added that SAC media, which integrates text, audio, video, and animation, can boost student motivation and enthusiasm for learning. Thus, SAC has proven to be an innovative and effective learning media, which can be applied in Arabic language education, particularly in improving students' writing skills and vocabulary mastery in pesantren.

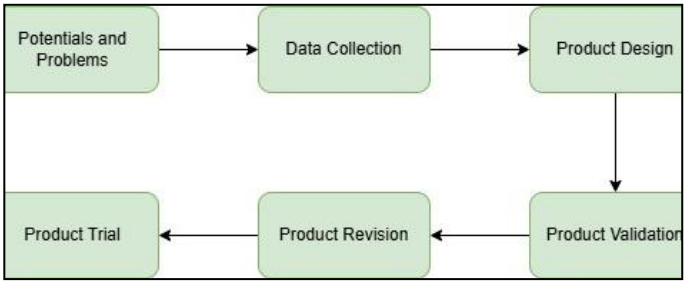
Although the use of Smart Apps Creator (SAC) has proven effective in various subjects, few studies have specifically examined its application in Arabic language learning, especially in improving writing skills (maharah al-kitabah) in pesantren. This study focuses on the development of SAC-based Arabic learning media to address issues related to student motivation and learning outcomes. The contribution of this research is to offer an innovative solution in Arabic language education in pesantren by leveraging SAC technology, which is expected to enhance students' writing skills, improve the learning process, and create a more interactive and enjoyable learning experience.

METHOD

This research was conducted at Pondok Pesantren Raudhatus Sakinah, Ogan Komering Ilir Regency, South Sumatra. The research type used in this study is mixed-method research, with a Research and Development (R&D) approach, employing the Borg and Gall model (Haviz, 2016), aimed at producing a product and testing its effectiveness (Haryati, 2020).

This R&D research consists of ten stages: Potential and Problems, Data Collection, Product Design, Design Validation, Design Revision, Product Trial, Product Revision, Usage Trial, Product Revision, and Mass Production (Gall et al., 2003). However, this study will only use six stages to minimize costs and save time, as done by (Imron et al., 2024; Sabana et al., 2024), which include potential problems, data collection, product design, product validation, product revision, and product testing, as depicted in Figure 1 below.

Figure 1. Research and Development Stages



Eighth-grade Arabic language instructors and fourteen eighth-grade pupils serve as the research subjects. Saturated sampling is used to collect data from the entire student population, which is restricted to just 14 people (Pimada et al., 2020), while purposive sampling (Mukmin, 2019) is used to obtain sufficient information from Arabic language teachers with particular criteria. There are two categories of data collecting methods: quantitative data is gathered through tests and questionnaires (Irmansyah et al., 2023; Mukmin & Irmansyah, 2017), and qualitative data is gathered through documentation, interviews, and observation (Hidayah, Mukmin, & Cardasyifa, 2024). Before creating a product, information is gathered through questionnaires, and its efficacy is assessed through testing.

After that, both qualitative and quantitative analytic methods are used to examine the gathered data. The Miles and Huberman model was used to reduce, show, and make conclusions in order to do qualitative analysis (Fadli, 2021). Furthermore, the validity and reliability of qualitative data were preserved by applying the concepts of confirmability, dependability, credibility, and transferability (Afiyanti, 2008). The efficacy of the created media is assessed quantitatively using the paired sample T-Test and N-Gain Score Test (Hidayah, Mukmin, & Nofiasari, 2024). A number of traditional assumption tests are also used as preconditions for parametric tests, including the normality and homogeneity tests (Jamanuddin` & Fitriyani, 2017).

RESULT AND DISCUSSION

Result

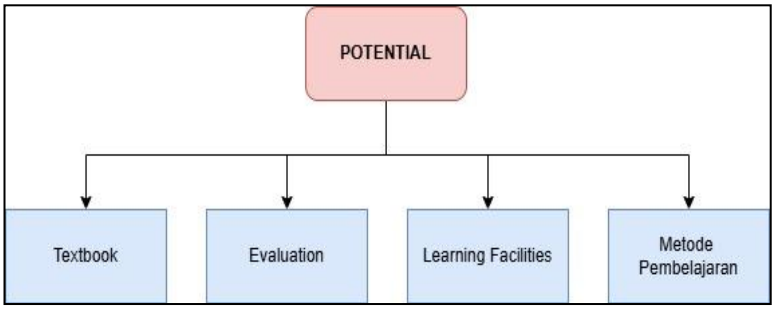


Figure 2. Potentialities identified by researchers

The development method adhered to the Borg and Gall theory, encompassing potential and issue analysis, data collecting, product design, product validation, product revision, and product testing. Interviews with the class teacher revealed several potentials in Arabic language learning, as illustrated in image 2, including the utilization of printed textbooks, assessment of learning through oral and written

evaluations, constrained facilities with prospects for further enhancement, and instructional methodologies. The teacher asserted, "For Arabic language acquisition, we exclusively utilize textbooks and Arabic language instructional materials." The teacher stated, "Subsequent to the material's explanation, students will receive oral questions to assess their comprehension, along with written practice questions." Observations indicate that the school solely utilizes a chalkboard and printed books as instructional resources, resulting in pupil disengagement. The instructor noted that educational practices continue to rely on traditional techniques, including lectures, question-and-answer sessions, and limited media utilization in instruction."

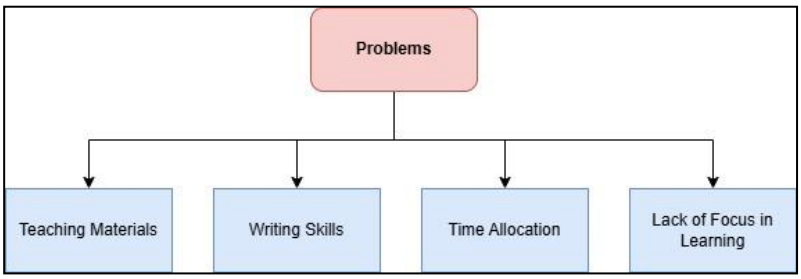


Figure 3. Issues Identified by the Researcher

This research reveals many challenges encountered in kitabah learning, in addition to potential, as seen in Figure 3. A primary concern is the reliance on printed books as the sole teaching materials, without other resources that may augment student engagement and comprehension. The Teacher said, "The instructional materials provided for learning are exclusively derived from printed books, lacking supplementation from additional sources that could enhance student motivation and comprehension of the material." Moreover, the pupils' writing proficiency remains inadequate, particularly in the accurate formation of Arabic letters, a situation exacerbated by insufficient practice and ineffective educational resources. The instructor said, "The students' writing abilities at the Raudhatus Sakinah Islamic boarding school remain inadequate and are not effectively demonstrated in the classroom's practice and learning process." The insufficient Arabic language class hours and the pupils' lack of concentration during classes are substantial impediments. The instructor stated, "In the acquisition of the Arabic language, particularly concerning the four linguistic competencies, there are merely two class hours weekly, with each session lasting approximately 35 minutes." The teacher remarked, "Numerous students remain unfocused during lessons, and some even exhibit drowsiness while the instruction is in progress."

Following the phase of identifying potential and issues, the subsequent phase involves the collection of data that can substantiate the construction of instructional materials. Interviews with Arabic language educators revealed that the objective of Arabic language instruction is to enable pupils to write Arabic fluently and properly, while also enhancing their vocabulary. Furthermore, pupils must comprehend the significance and context of the texts they read. Moreover, interviews with students indicated that comprehending Arabic, especially in written form, remains challenging; hence, when assigned Arabic tasks, students require many clarifications from the instructor. Subsequently, in the process of data collection, the researcher obtained student needs data by administering a questionnaire on October 14, 2024. The findings of the questionnaire are shown herein.

Table 1. Results of the Student Needs Survey

No	Statement	Jawaban					Percentage
		SA	A	N	D	SD	
1	Students are enthusiastic about learning Arabic using a Game-Based Media with Smart Apps Creator in writing material	11	2	1	0	0	78.57%
2	Students easily understand writing texts using Game-Based Media with Smart Apps Creator	12	2	0	0	0	85.71%
3	Game-Based Media using Smart Apps Creator is very suitable for teaching Arabic	9	3	2	0	0	64.29%
4	Students enjoy the presence of Game-Based Media using Smart Apps Creator in writing skills learning	11	2	1	0	0	78.57%

No	Statement	Jawaban					Percentage
		SA	A	N	D	SD	
5	The development of Game-Based Learning using Smart Apps Creator makes it easier for students to learn Arabic	11	3	0	0	0	78.57%
6	Does the Game-Based Media using Smart Apps Creator attract your attention in learning Arabic?	11	2	1	0	0	78.57%
Average							**77.38%**

Table 2. Criteria for Student Needs Questionnaire Scores

Range	Criteria	Validity
80-100	Very Good	Highly Valid
65-79	Good	Valid
55-64	Fairly Good	Fairly Valid
40-54	Poor	Less Valid
0-39	Very Poor	Not Valid

The results of the student needs questionnaire, comprising six questions as outlined in Table 1, indicate that, according to the scoring criteria in Table 2, students support the implementation of an innovative approach to kitabah learning utilizing gamification media, achieving a score of 77.38%, categorized as "Good" or "Valid." Consequently, the researcher may forward to the subsequent phase, namely the product design procedure.

The product design phase for educational gaming media commences with various processes, including composing the content, incorporating pertinent graphics, and using appealing colors to augment visual attractiveness. The creation of this game material utilizes the Smart Apps Creator tool. Commence by launching the program and selecting the "Insert" option to access the required pieces. Researchers utilize the "Image" option to incorporate pictures created via Canva or obtained from the internet, and the "Audio" icon to integrate audio recordings that enhance the content. Text is inputted via the "Text" icon, while answer input boxes are generated using the "TextInput" icon, enabling students to submit responses that will subsequently be evaluated against the proper answers. The "Counter" emblem is utilized to incorporate gaming features, such points or scores. This medium has several essential components, including a cover page and a menu with three primary options: learning objectives, resources, and activities to be undertaken by the learners. Upon completion of all aspects, the design output is exported by selecting the "Output" option to transform the program into a ready-to-use instructional game for learning purposes.

The outcome of the educational game media product developed using the Smart Apps Creator program commences with an appealing first application interface. Upon launching the program, the initial screen displayed is the cover page featuring the title "Class VIII Kitabah Learning" centrally positioned, as illustrated in figure 4. This website features animated photos of youngsters engaging in play at school, fostering a delightful ambiance and igniting the interest of the students. This display aims to provide a captivating initial impression for viewers, motivating them to pursue further study..

Figure 4. Cover Page

The subsequent section presents the primary menu screen of the program, seen in figure 5, which functions as a resource for students to acquire essential learning material. This menu comprises three primary options: Learning Objectives, Materials, and Exercises. The three buttons may be clicked to get

to the respective pages. Each page is organized with relevant content, with clearly articulated learning objectives and comprehensible material. The material page contains text and animations that enhance the narrative of the subject being studied, so rendering the learning experience more dynamic and engaging.

Figure 5. Menu Display

Upon selecting "Learning Objectives," a description of the learning objectives of kitabah will be provided. Featuring an illustration of an open book with supplementary bird animations above, as seen in image 6.

Figure 6. Kitabah Learning Objectives Page

Subsequently, the material part has many pages designed for practicing reading and comprehending the content thoroughly, enabling you to respond to the questions offered on the subsequent pages. Examples of the material design are seen in figures 7 and 8.

Figure 7. Illustration of Material Page

Figure 8. Illustration of Material Page

In the final section, which is the practice, students can assess their understanding through multiple-choice and true-false questions provided. Each correctly answered question will add to their score, offering motivation to continue learning. For example, each correct answer in the multiple-choice section will add 5 points, and if all questions are answered correctly, the student will receive a score of 50. Furthermore, in the true-false section, students will earn 5 points for each correct answer, and if they successfully answer all questions, they will achieve a perfect score of 100. All questions are accompanied by animations that correspond to the narrative in the questions, enriching the learning experience and maintaining the students' interest. Below are examples of some of the designs.

Figure 9. Example of Practice Page

Figure 10. Example of Practice Page

After creating the product, the researcher proceeded to the next stage, which is product validation. In this study, the validation was conducted by two experts: Rendi Sabana, M.Pd.I., a subject matter expert, and Irmansyah, M.Pd.I., a media expert. During the content validation phase, Rendi Sabana assessed the aspects of the learning material. Based on the questionnaire provided, the educational game media product received a score of 81.33%, falling under the category of "Very Good/Highly Valid." Several aspects were evaluated, including the understanding of the material, accuracy of the content, alignment of the material with the learners' conditions, and the appropriate use of language, as detailed in Table 3. Although the product received a good score, there were still some corrections and suggestions from the validators, such as the use of dialects that align with the Arabic language culture and paying attention to the vocabulary and rules used in the material. These suggestions are more specifically outlined in Table 4. Based on these suggestions, the researcher made revisions to improve the material so that it would be more suitable and appropriate for use in learning.

Table 3. Expert Content Validation Results

Aspect	No	Indicator	Category	Score
Content	1	The material is easy to understand	B	4
	2	Accuracy of the presented content	B	4
	3	Clarity of the material description	B	4
	4	Relevance of the material to the learners' conditions	SB	5
	5	Appropriateness of images or charts to clarify material	B	4
	6	Difficulty level of the questions	B	4
	7	Relevance of exercises to the material	B	4
	8	Variety in question types	B	4

Aspect	No	Indicator	Category	Score
	9	Consistency in language used in presenting material	B	4
	10	Appropriate language usage in explaining the material	B	4
Learning	1	Clarity of learning instructions	B	4
	2	Accuracy of the material explanation	B	4
	3	Systematic presentation of questions	B	4
	4	Learning activities can motivate students	B	4
	5	Providing exercises for material understanding	B	4
Total Score			61	
Percentage Score			81.33%	
Average Score			4,07	
Category			Very Good/Highly Valid	

Table 4. Suggestions from the Expert Content Validator

Validator	No	Suggestions
Rendi Sabana, M.Pd. I	1	Use the correct dialect in accordance with Arabic language culture.
	2	Pay attention to the vocabulary and rules used.
	3	Enhance the images to align with the storyline.

Meanwhile, the media validation was conducted by Irmansyah, M.Pd.I., who assessed the visual aspects and usage of the learning media. The validation results showed a score with a percentage of 86% and the category of "Very Good/Highly Valid." The aspects evaluated included the game cover design, image selection, colors, panel layout, and the type of font used. Additionally, aspects such as ease of use and time efficiency were also given attention, as detailed in Table 5. These validation results indicate that the developed game media is very good; however, there were some suggestions provided, such as aligning the cover with the theme, improving the usage instructions, and selecting more suitable animation colors to enhance student motivation, as shown in Table 6. The researcher made revisions based on the provided suggestions to ensure the media produced can be optimally used in learning.

Table 5. Design Expert Validation Results

Aspect	No	Indicator	Category	Score
Content	1	Game cover design	B	4
	2	Image selection in the game	B	4
	3	Color selection for images in the game	B	4
	4	Panel layout and design	SB	5
	5	Selection of speech bubbles for questions	B	4
	6	Clarity and appropriateness of the font used	B	4
	7	Readability and comprehension level	B	5
Learning	1	Ease of use	B	5
	2	Clarity of usage instructions	B	4
	3	Time efficiency	B	4
Total Score			43	
Percentage Score			86%	
Average Score			4.3	
Category			Very Good/Highly Valid	

Table 6. Suggestions from the Design Expert

Validator	No	Saran
Irmansyah, M.Pd.I.	1	Cover aligns with the theme/content
	2	Usage instructions
	3	Background
	4	Suitable animation colors
	5	Enhance animations and colors that can increase student motivation

In the next phase, which is the product revision, the researcher evaluates the designed product with feedback from material and media validators, as can be traced in Tables 4 and 6. The following will present the revisions for the material before and after the revisions were made. These revisions include the use of proper dialect in accordance with Arab culture, ensuring grammatical and vocabulary accuracy, and enriching the images to align with the storyline, as shown in Figures 11 and 12.

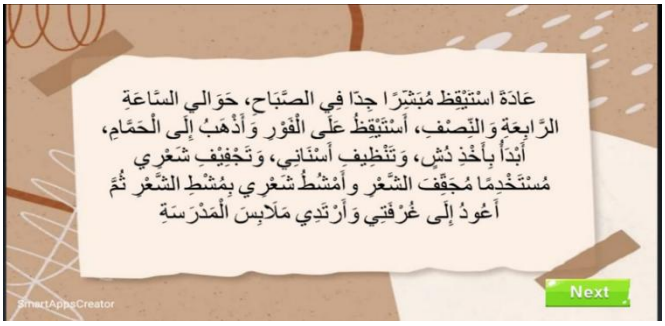


Figure 11. Example of Material Revision (Before)

Figure 12. Example of Material Revision (After)

After the material revision, the researcher will also follow the suggestions from the media validators as summarized in Table 6. These include adjusting the cover to match the theme, providing usage instructions, paying attention to the background design, ensuring that the animation colors are more suitable, and enriching the animations and colors to enhance student motivation. The following are examples of the revisions, which can be seen in Figures 13 and 14.

Figure 13. Example of Media Revision (Before)

Figure 14. Example of Media Revision (After)

After the product revision, the next phase will proceed to the product trial stage. The researcher will conduct a trial of the product with eighth-grade students at the Islamic boarding school through pre-test and post-test assessments. During the treatment phase, between the pre-test and post-test, the students will be provided with material via a game-based media. They will then be asked to read and rewrite the text on paper to directly practice their writing skills. After both tests are conducted, the students' scores will be obtained to test the hypothesis. However, before testing the hypothesis, the researcher will first test the classical assumptions as a prerequisite for parametric testing. The results of the homogeneity and normality tests are as follows.

Table 7. Results of the Normality Test for Pre-test and Post-test Scores

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		14
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	6.33503165
Most Extreme Differences	Absolute	.125
	Positive	.125
	Negative	-.080
Test Statistic		.125
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Based on the test results, the test statistic value is 0.125, with a significance value (Asymp. Sig.) of 0.200, which is greater than the common significance level of 0.05. This indicates that there is insufficient evidence to reject the null hypothesis that the residuals are normally distributed (Mukmin, 2019). Therefore, it can be concluded that the residual data do not significantly differ from a normal distribution, in line with the test results indicating that the residual distribution follows a normal distribution. Next, the results of the homogeneity test will be presented, as shown in Table 8 below.

Table 8. Results of the Homogeneity Test for Pre-test and Post-test Scores

		Levene Statistic	df1	df2	Sig.
The Learning Outcomes	Based on Mean	4.687	1	26	.040
	Based on Median	4.163	1	26	.052
	Based on Median and with adjusted df	4.163	1	25.946	.052
	Based on trimmed mean	4.850	1	26	.037

The Levene's Test for Homogeneity of Variance was conducted to examine whether the variances across groups in the learning outcomes variable are homogeneous or uniform. Based on the test results, the Levene Statistic value for "Based on Mean" is 4.687 with a significance value of 0.040, which is smaller than the significance level of 0.05 (Usmadi, 2020), indicating a significant difference in variance between the groups. However, for "Based on Median" and "Based on Median and with adjusted df", the

significance values are 0.052 for each, which is greater than 0.05, indicating no significant difference in variance in these two methods. Meanwhile, for "Based on Trimmed Mean", the significance value is 0.037, which is also smaller than 0.05, indicating a significant variance difference between the groups. Overall, these results suggest that the variance of learning outcomes based on "Mean" and "Trimmed Mean" is not homogeneous. Therefore, hypothesis testing cannot be performed using parametric tests that require the fulfillment of all classical assumption tests (Yavuz & Utku, 2021). As an alternative for hypothesis testing, this study will employ the Wilcoxon test (Meléndez et al., 2021). However, before testing the hypothesis, the researcher will first present the results of the pre-test and post-test scores.

Table 9. Pre and Post-Test Result

Students' Name	Pre-Test	Post-test
Aisyah	60	85
Aldi	65	95
Ardiansyah	70	85
Ayub	70	100
Bahlia	65	90
Bayu Kuncoro	65	85
Boy Berlin	70	80
Cek Rian	70	90
Degi Septian	65	85
Dela Ramadani	75	85
Faisal	60	95
Firmansyah	60	100
Meldy Saputra	65	95
Indah Enggelia	65	100
Rata-rata	**66,07**	**90,71**

Table 10. Results of the Wilcoxon Signed Rank Test

Ranks

		N	Mean Rank	Sum of Ranks
Post_Test - Pre_Test	Negative Ranks	0[a]	.00	.00
	Positive Ranks	14[b]	7.50	105.00
	Ties	0[c]		
	Total	14		

a. Post_Test < Pre_Test

b. Post_Test > Pre_Test

c. Post_Test = Pre_Test

Next is the hypothesis testing. Based on Table 10, the results of the rank difference test between the Post-test and Pre-test show that no participants had a lower Post-test score than their Pre-test score (Negative Ranks = 0). A total of 14 participants had a higher Post-test score than their Pre-test score (Positive Ranks = 14), with an average rank of 7.50 and a total rank sum of 105.00. No participants had the same score between the Post-test and Pre-test (Ties = 0). This indicates that all participants showed an improvement in scores after taking the Post-test compared to the Pre-test. The next step is the hypothesis test results to validate the research hypothesis.

Table 11. Results of Hypothesis Testing Using the Wilcoxon Test

Test Statistics[a]

	Post_Test - Pre_Test
Z	-3.305[b]
Asymp. Sig. (2-tailed)	.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Based on Table 11, the results of the Wilcoxon Signed Ranks test show that the Z statistic for the comparison between the Post-test and Pre-test is -3.305, with an Asymp. Sig. (2-tailed) value of 0.001. Since the significance value is less than 0.05 (Imron et al., 2023), we can reject the null hypothesis and conclude that there is a significant difference between the Post-test and Pre-test scores. In other words, the results of this test indicate that there was a significant change in participants' scores after taking the Post-test compared to the Pre-test.

Discussion

Through the results of the Wilcoxon test, this study demonstrates a significant difference between the pre-test and post-test scores of the students, with a significance value of 0.001. This indicates that the game-based learning media is effective in improving students' Arabic writing skills (kitabah), which were previously relatively low, as identified in the issues raised during the study.

In this regard, the findings of this study align with gamification theory in education, which posits that the use of games in learning can enhance student motivation and engagement (Vrcelj et al., 2023). The application of game-based media has also proven effective in addressing the boredom often experienced by students in traditional learning settings, as mentioned by the teacher during interviews, where learning was still conducted using printed books and lecture methods. Game-based learning allows students to engage in a more interactive and enjoyable learning process, consistent with the study's findings that show an improvement in students' scores from the pre-test to the post-test after using the game media.

This research shares similarities with several previous studies that also examined the use of digital media or gamification in Arabic language learning. For instance, the study by (Ghani & Daud, 2023) developed game-based learning media for Arabic language students, which also found significant improvements in communication skills. Another study by (Hamzah et al., 2019) also identified that game-based media can enhance student motivation and learning outcomes, particularly in the context of Arabic language learning for foreign speakers (Almelhes, 2024). Moreover, gamified learning has been shown to develop students' problem-solving skills (Feng et al., 2024).

However, this study also has its own uniqueness as it was conducted in an Islamic boarding school (pesantren), where traditional teaching methods still dominate Arabic language learning, which is one of the external challenges identified in the study (Djuaeni & Usman, 2021). Therefore, the innovation of game-based learning media is expected to have a greater impact on improving the quality of learning in pesantren. Additionally, the use of Smart Apps Creator as a tool to develop this educational game provides a new alternative for developing technology-based learning media that is more accessible to teachers in pesantren.

The results of this study reinforce existing learning theories, particularly those related to constructivist theory, which emphasizes the importance of active experience in learning. Game-based learning offers students the opportunity to directly engage with the material and solve problems in more authentic contexts, consistent with the concept of learning through experience, as demonstrated in the study (Zhao et al., 2024). This innovation also aligns with Vygotsky's views on the importance of social and cultural context in learning (Gower et al., 2025), where technologies like games can be used to create more meaningful learning experiences.

However, this study also opens the possibility for developing new theories regarding the effectiveness of technology use in the context of pesantren education, which has different social and cultural characteristics from formal education in general schools. In this regard, the use of technology in pesantren learning should be adapted to the values of Islam and the needs of students who learn in such environments.

Based on the findings of this study, there are several important implications for the field of education, particularly in the context of teaching Arabic in pesantren. First, the use of game-based media can be an effective alternative to improve the quality of kitabah learning, which has often been considered boring and difficult to understand by students. This innovation can help students better understand the material and enhance their writing skills.

Second, the findings of this study provide empirical evidence that the use of technology in learning can increase student motivation and learning outcomes, which is an important finding for the development of curriculum and teaching methods in pesantren. Therefore, pesantren can consider integrating technology into their teaching processes, such as the use of game-based learning apps, to support a more modern and engaging learning experience.

Finally, this study also contributes to the development of technology-based learning media in pesantren settings. By using applications like Smart Apps Creator, pesantren can create interactive learning materials that are tailored to students' needs without requiring expensive or complex technology. This opens up opportunities for pesantren to further develop their potential in the realm of technology-based education.

Conclusion

This study successfully developed and tested a game-based learning innovation for Arabic writing (kitabah) using Smart Apps Creator at Pondok Pesantren Raudhatus Sakinah. Through the application of the Research and Development (R&D) method with simplified steps, this research demonstrated that game-based learning media can enhance students' motivation, comprehension, and Arabic writing skills. Based on the results of the pre-test and post-test, as well as questionnaires showing valid results, the media proved effective in helping students overcome difficulties in learning kitabah.

However, this study has some limitations, such as the limited sample size and time constraints affecting the product trial phase. Future research is expected to expand the sample size and conduct more in-depth trials to test the effectiveness of the media in various pesantren contexts. Furthermore, this study opens opportunities for further development in creating more advanced game-based learning applications that can be used more broadly. The prospects for the development of this research include the possibility of integrating more interactive elements into the learning media, as well as applying more adaptive technologies to improve the quality of education in pesantren.

DAFTAR PUSTAKA

Afiyanti, Y. (2008). Validitas dan Reliabilitas Dalam Penelitian Kualitatif. *Jurnal Keperawatan Indonesia*, *12*(2), Article 2. https://doi.org/10.7454/jki.v12i2.212

Almelhes, S. A. (2024). Gamification for teaching the Arabic language to non-native speakers: A systematic literature review. *Frontiers in Education*, *9*. https://doi.org/10.3389/feduc.2024.1371955

Aulia, S., Fadhilah, S. N., Siregar, S. A., Chandra, R. R., & Nasution, S. (2024). Menerapkan Pembelajaran Bahasa Arab Pada Maharah Kitabah Dengan Strategi Guided Composition. *Perspektif: Jurnal Pendidikan Dan Ilmu Bahasa*, *2*(1), Article 1. https://doi.org/10.59059/perspektif.v2i1.886

Aziz, I., Damariswara, R., & Sahari, S. (2024). Pengembangan Multimedia Interaktif Berbasis Aplikasi SAC (Smart Apps Creator) Untuk Meningkatkan Kemampuan Menyusun Huruf Alfabet Menjadi Kata Yang Bermakna Pada Siswa Kelas I SDN 3 Ngrencak: Development Of Interactive Multimedia Based On The SAC Application (Smart Apps Creator) To Improve The Ability To Arrange Alphabet Letters Into Meaningful Words In Class I Students Of SDN 3 Ngrencak. *Inventa: Jurnal Pendidikan Guru Sekolah Dasar*, *8*(1), Article 1. https://doi.org/10.36456/inventa.8.1.a8766

Djuaeni, M. N., & Usman, A. (2021). Al-lughah al-'arabiyah fi al-ma'ahid al-islamiyah bi indunisiya: Mushkilatuha wa turuq halliha. *Studia Islamika*, *28*(2), 413–455. Scopus. https://doi.org/10.36712/sdi.v28i2.21936

Fadli, M. R. (2021). Memahami desain metode penelitian kualitatif. *Humanika, Kajian Ilmiah Mata Kuliah Umum*, *21*(1), Article 1. https://doi.org/10.21831/hum.v21i1.38075

Feng, J., Tan, W. H., & Yu, B. (2024). A Systematic Literature Review of The Impact of Gamification Instruction on Students' Problem-Solving Skills. *International Journal of Evaluation and Research in Education (IJERE)*, *13*(6), Article 6. https://doi.org/10.11591/ijere.v13i6.29695

Gall, M., Borg, W., & Gall, J. (2003). Educational Research: An Introduction. *British Journal of Educational Studies*, *32*. https://doi.org/10.2307/3121583

Ghani, M. T. A., & Daud, W. A. A. W. (2023). The Impact of Digital Game-Based Learning Towards Arabic Language Communication. *Jurnal Komunikasi: Malaysian Journal of Communication*, *39*(1), Article 1. https://doi.org/10.17576/JKMJC-2023-3901-23

Gower, I. F., Lee, D., & Palmer, E. (2025). Immersive Opportunities: A Systematic Review of Virtual Reality in the Classroom. In W. Barbieri & E. Palmer (Eds.), *Risks and Opportunities in Using Educational Technologies* (pp. 87–115). Springer Nature. https://doi.org/10.1007/978-981-96-1595-7_8

Hamzah, M., Ghani, M. T. A., Daud, W. A. A. W., & Ramli, S. (2019). Digital Game-based Learning as an Innovation to Enhance Student's Achievement for Arabic Language Classroom. *International*

Journal of Recent Technology and Engineering (IJRTE), *8*(3), 2108–2112. https://doi.org/10.35940/ijrte.C4554.098319

Haryati, S. (2020). *Research and Development (R&D) Sebagai Salah Satu Model Penelitian Dalam Bidang Pendidikan*. https://ejournal.stitpn.ac.id/index.php/nusantara/article/view/828

Hasrullah, H., Jabu, B., & Muhayyang, M. (2024). Using Smart Apps Creator (SAC) as an Android-Based Learning Multimedia in Improving the Students' Vocabulary Achievement. *EduLine: Journal of Education and Learning Innovation*, *4*(2), 273–279. https://doi.org/10.35877/454RI.eduline2619

Haviz, M. (2016). Research and Development; Penelitian di Bidang Kependidikan Yang Inovatif, Produktif dan Bermakna. *Ta'dib*, *16*(1), Article 1. https://doi.org/10.31958/jt.v16i1.235

Hidayah, N., Mukmin, & Cardasyifa. (2024). CEFR Pada Materi Bahasa Arab: Inovasi Pembelajaran Ramah Anak Pada Sekolah Dasar. *Kiddo: Jurnal Pendidikan Islam Anak Usia Dini*, 117–127. https://doi.org/10.19105/kiddo.v1i1.12742

Hidayah, N., Mukmin, & Nofiasari, U. (2024). Learning Evaluation of Arabic Morfhoplogy For Tsanawiyah Students Based on 21st Century Competencies Using The Educandy Web. *Proceeding International Conference on Islam and Education (ICONIE)*, *3*(1), Article 1.

Imron, K., Abdullah, M. Y., Nurani, Q., Rohayati, E., & Jamanuddin, J. (2024). A New Direction of Arabic Language Teaching: Integration Muthala'ah Text Book and Religious Moderation Concept. *Al-Ta'rib: Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya*, *12*(1), 69–88. https://doi.org/10.23971/altarib.v12i1.7779

Imron, K., Irmansyah, I., Nurhusna, N., Maimunah, I., & Hajib, Z. A. (2023). A New Model of Kalam Material Through Cybernetic Approach: Development Stages and The Influence Towards Speaking Skill of Students. *Jurnal Al Bayan: Jurnal Jurusan Pendidikan Bahasa Arab*, *15*(1), 207–223. https://doi.org/10.24042/albayan.v15i1.16199

Irmansyah, I., Qaaf, M. A., & Yuslina, Y. (2023). Pengembangan Media Pembelajaran Bahasa Arab Menggunakan Aplikasi Canva Berbasis SAVI (Somatis, Auditori, Visual dan Intelektual). *Jurnal Al-Mashadir: Journal of Arabic Education and Literature*, *3*(01), Article 01. https://doi.org/10.30984/almashadir.v3i01.610

Jamanuddin`, J., & Fitriyani, F. (2017). Tathbîq Al-Tharîqah Al-'Asywaiyyah Litarqiyyah Mahârah Al-Kitâbah Ladayy Al-Talâmîdz Fî Al-Shaffi Al-Khâmis Bil-Madrasah Al-Ibtidâiyyah Lima'had Al-Islâmiyyah Palembang. *Taqdir*, *3*(2), 16–31. https://doi.org/10.19109/taqdir.v3i2.1761

Junaidi, M. R., & Busthomi, M. Y. A. (2025). Desain Media Pembelajaran Bahasa Arab Menggunakan Smart App Creator (SAC). *Fashohah: Jurnal Ilmiah Pendidikan Bahasa Arab*, *5*(1), Article 1. https://doi.org/10.33474/fsh.v5i1.23293

Meléndez, R., Giraldo, R., & Leiva, V. (2021). Sign, Wilcoxon and Mann-Whitney Tests for Functional Data: An Approach Based on Random Projections. *Mathematics*, *9*(1), Article 1. https://doi.org/10.3390/math9010044

Mukmin, M. (2019). The Effect of Educational Background and Language Competence on Students' Arabic Language Motivation. *Arabiyat: Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban*, *6*(1), Article 1. https://doi.org/10.15408/a.v6i1.10484

Mukmin, M., & Irmansyah, I. (2017). Tathwîr Mawâd Alfidiyu (Wasâil Al-Sam'iyyah Al-Bashariyyah) Fî Ta'lîm Al-Lughah Al-'Arabiyyah. *Taqdir*, *3*(1). https://doi.org/10.19109/taqdir.v3i1.1713

Mustafa, M., Alisa, N., & Pamessangi, A. A. (2023). Pengembangan Media Interaktif Digital Bahasa Arab Dengan Media Smart Apps Creator Kelas X di SMA Negeri 7 Luwu Timur. *Jurnal Sinestesia*, *13*(1), Article 1.

Nasution, S., Asari, H., Al-Rasyid, H., Dalimunthe, R. A., & Rahman, A. (2024). Learning Arabic Language Sciences Based on Technology in Traditional Islamic Boarding Schools in Indonesia. *Nazhruna: Jurnal Pendidikan Islam*, *7*(1), Article 1. https://doi.org/10.31538/nzh.v7i1.4222

Nurkholis, N. (2017). Metode Pembelajaran Bahasa Arab Di Pondok Pesantren Tradisional. *An Nabighoh*, *19*(2), Article 2. https://doi.org/10.32332/an-nabighoh.v19i2.1002

Pimada, L. H., Toba, R., & Rasyidi, A. W. (2020). Learning of Imla' Using Flashcards on Writing Skill at Islamic Elementary School Level in Samarinda. *Izdihar: Journal of Arabic Language Teaching, Linguistics, and Literature*, *3*(1), Article 1. https://doi.org/10.22219/jiz.v3i1.11682

Ratnasari, D., & Ansori, I. (2024). Media Smart Apps Creator Berbasis Problem Based Learning Meningkatkan Kemampuan Menulis Kalimat Efektif. *Jurnal Penelitian Dan Pengembangan Pendidikan*, *8*(1), Article 1. https://doi.org/10.23887/jppp.v8i1.68614

S, Y. D., Amrina, A., Gazali, G., Mudinillah, A., Agustina, A., & Luksfinanto, Y. (2021). Utility of the Smart App Creator Application as an Arabic Learning Media. *Izdihar: Journal of Arabic Language Teaching, Linguistics, and Literature*, *4*(3), Article 3. https://doi.org/10.22219/jiz.v4i3.17886

Sabana, R., Imron, K., & Ulayya, S. (2024). Pengembangan Materi Qiraah Berbasis Pendekatan Saintifik Dengan Media Pixton Komik di MTsN 1 Palembang. *Arabia*, *16*(1), Article 1. https://doi.org/10.21043/arabia.v16i1.24344

Sharp, J. G., Hemmings, Brian, Kay, Russell, & and Sharp, J. C. (2019). Academic boredom and the perceived course experiences of final year Education Studies students at university. *Journal of Further and Higher Education*, *43*(5), 601–627. https://doi.org/10.1080/0309877X.2017.1386287

Shimray, R., & and Wangdi, T. (2025). Boredom in online foreign language classrooms: Antecedents and solutions from students' perspective. *Journal of Multilingual and Multicultural Development*, *46*(2), 288–303. https://doi.org/10.1080/01434632.2023.2178442

Syafei, I., Suleman, E., & Rohanda, R. (2024). The Development of Student Reading Skills in Arabic for Reading Islamic Classical Books Using the Arabic Learning Model at Indonesian Islamic Boarding Schools. *Theory and Practice in Language Studies*, *14*(5), Article 5. https://doi.org/10.17507/tpls.1405.10

Usmadi, U. (2020). Pengujian Persyaratan Analisis (Uji Homogenitas dan Uji Normalitas). *Inovasi Pendidikan*, *7*(1), Article 1. https://doi.org/10.31869/ip.v7i1.2281

Vrcelj, A., Hoić-Božić, N., & Dlab, M. H. (2023). Use of Gamification in Primary and Secondary Education: A Systematic Literature Review. *International Journal of Educational Methodology*, *9*(1), 13–27. https://doi.org/10.12973/ijem.9.1.13

Yavuz, H., & Utku, D. H. (2021). Parametric and non-parametric tests for the evaluation of interlaminar fracture toughness of polymer composites. *Journal of Reinforced Plastics and Composites*, *40*(11–12), 450–462. https://doi.org/10.1177/0731684420973078

Zhao, W., Li, X., & Chen, Z. (2024). Research on PBL Teaching in Engineering Graphics from the Perspective of Constructivist Theory. In K. Takenouchi (Ed.), *ICGG 2024—Proceedings of the 21st International Conference on Geometry and Graphics* (pp. 244–250). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-71225-8_22